ANNUAL REPORT
(2018 – 2019)

RATHINDRA KRISHI VIGYAN KENDRA
PALLI SIKSHA BHAVANA
(INSTITUTE OF AGRICULTURE)
VISVA-BHARATI

SRINIKETAN, P. O. – SRINIKETAN,
DIST. - BIRBHUM, WEST BENGAL – 731236,
INDIA

PRESENTED AT

THE ZONAL WORKSHOP OF KRISHI VIGYAN KENDRAS (KVKs) OF THE STATES OF ODISHA, WEST BENGAL AND ANDAMAN AND NICOBAR ISLANDS, ICAR-ATARI, KOLKATA, ZONE – V

ORGANIZED AT

UTTAR BANGA KRISHI VISWAVIDYALAYA

PUNDIBARI, DIST. – COOCH BEHAR, WEST BENGAL – 736165

ON

8th. JUNE – 10th. JUNE, 2019

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PROFORMA FOR ANNUAL REPORT 2018-19 (April 2018 to March 2019)

1. GENERAL INFORMATION ABOUT THE KVK

1.1. Name and Address of KVK with Phone Number, Fax Number and E-Mail Address

Address	Telephone Number		E-Mail
Rathindra Krishi Vigyan Kendra Palli Siksha Bhavana (Institute of Agriculture) Visva-Bharati, Sriniketan, P. O. – Sriniketan, Dist. – Birbhum, Pin. – 731236, West Bengal, India	Office 03463-264771	FAX 03463-264771	rathindrakvk@gmail.com rathindrakvk@rediffmail.com

1.2. Name and Address of Host Organization with Phone Number, Fax Number and E-Mail

Address	Telephone Number		E-Mail
	Office	FAX	
Visva-Bharati, Santiniketan, P. O. – Santiniketan, Dist. – Birbhum, Pin. – 731235, West Bengal, India.	03463 - 262-751 to 262-756 (6 lines)	03463-262-672	**Vice-Chancellor: vice-chancellor@visva-bharati.ac.in** **Registrar: registrar@visva-bharati.ac.in** **Principal, Palli Siksha Bhavana (Institute of Agriculture) and In-Charge Rathindra KVK: acpsb02@yahoo.co.in**

1.3. Name of Senior Scientist and Head [Programme Coordinator (Officiating)] with phone & mobile No.

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Subrata Mandal	-	9434431350	smkvkb@gmail.com

1.3. Name of the Programme Coordinator with Phone Number and Mobile Number

Name	Telephone / Contact		
Dr. Subrata Mandal	Residence	Mobile	E-mail
	-	9434431350	smkvkvb@gmail.com

1.4. Year of sanction: F.2 (2)\ 93-AE-1 on 4thOctober, 1994. Actual month of start: April, 1995 (Reference of Sanction Order).

1.5. Staff Position (as on 1st April, 2018)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale with present basic	Date of joining	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	**Senior Scientist & Head (Programme Coordinator)**	Vacant	Programme Coordinator	-	PB- 4, Rs.37400-67000/- + RGP - Rs.9000/-	Vacant since 01.11.2016.	Permanent	-
2	**Subject Matter Specialist**	Dr.Subrata Mandal	Programme Coordinator (Officiating) and Subject Matter Specialist	Agronomy	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 24650/-)	01.08.2004	Permanent	GC
3	**Subject Matter Specialist**	Sri Sourav Mondal	Subject Matter Specialist	Plant Protection	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 24650/-)	01.08.2004	Permanent	SC
4	**Subject Matter Specialist**	Dr. Krishna Mitra	Subject Matter Specialist	Fishery	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 21300/-)	26.05.2012	Permanent	GC
5	**Subject Matter Specialist**	Dr. Prabuddha Ray	Subject Matter Specialist	Agricultural Extension	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 18240/-)	19.06.2012	Permanent	GC
6	**Subject Matter Specialist**	Dr. Madhuchhanda Khan	Subject Matter Specialist	Animal Science	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/-+ NPA 25% (Rs. 16880/-)	10.06.2014	Permanent	GC
7	**Subject Matter Specialist**	Vacant	Subject Matter Specialist	Home Science	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 33100/-)	Vacant since 01.09.2018	Permanent	-
8	**Programme Assistant**	Vacant	Programme Assistant	-	PB-2, Rs. 9300-34800/- + GP-Rs.4200/-	Vacant since inception	Permanent	-
9	**Computer Programmer**	Sri Suraj Kumar Bhakta	Programme Assistant (Computer Programmer)	-	PB-2, Rs. 9300-34800/- + GP-Rs.4200/- (Rs. 10130/-)	16.06.2014	Permanent	OBC

10	**Farm Manager**	Sri Palash Ankure	Programme Assistant (Farm Manager)	-	PB-2, Rs. 9300-34800/- + GP-Rs.4200/- (Rs. 10130/-)	18.09.2014	Permanent	SC
11	**Accountant / Superintendent**	Vacant	Senior Assistant	-	PB-2, Rs. 9300-34800/- + GP- Rs.4200/-	Vacant since 01.04.2017	Permanent	-
12	**Stenographer**	Sri Makbul Ahmed	Jr. Stenographer-cum-Computer Operator	-	PB-1, Rs. 5200-20200/- + GP-Rs.2400/- (Rs. 11740/-)	13.04.1995	Permanent	GC
13.	**Driver**	Sri Krishna Bansi Chatterjee	Driver-cum-Mechanic	-	PB-2, Rs. 9300-34800/ - + GP- Rs.4200/- (Rs. 11560/-)	06.05.1997	Permanent	GC
14.	**Driver**	Sri Bikash Chandra Ghosh	Driver-cum-Mechanic	-	PB-2, Rs. 9300-34800/ - + GP- Rs.4200/- (Rs. 11560/-)	06.05.1997	Permanent	GC
15.	**Supporting staff**	Sri Chowdhury Md. Anwar	Supporting Staff	-	PB-1, Rs. 5200-20200/ - + GP- Rs.1900/- (Rs. 9850/-)	13.04.1995	Permanent	GC
16.	**Supporting staff**	Sri NaranTudu	Supporting Staff	-	PB-1, Rs. 5200-20200/ - + GP- Rs. 1800/- (Rs. 6090/-)	05.06.2014	Permanent	ST

1.6. Total land with KVK (in ha)

Sl. No.	Item	Area (ha)
1.	Under Buildings	00.550
2.	Under Demonstration Units	00.002
3.	Under Crops for Demonstration	02.000
4.	Orchard/Agro-forestry	01.000
5.	Under Seed Production	04.000
6.	Stocking and Rearing Pond	01.000
7.	Nursery Pond	00.013
8.	Under Fallow and farm roads	07.080
6.	**Total**	**15.645**

1.7. Infrastructure Development:

A) Buildings and others

Sl. No.	Name of infrastructure	Not yet started	Completed up to plinth level	Completed up to lintel level	Completed up to roof level	Totally completed	Plinth area (sq.m)	Under use or not*	Source of funding
1.	Administrative Building					Totally completed	550.00	Under use	ICAR
2.	Farmers' Hostel					Totally completed	305.00	Under use	ICAR
3.	Staff Quarters (6)								
4.	Piggery unit								
5	Fencing								
6	Rain Water harvesting structure								
7	Threshing floor					Totally completed	180.00	Under use	ICAR
8	Farm go-down					Totally completed	46.25	Under use	ICAR
9.	Dairy unit								
10.	Poultry unit					Totally completed	80.00	Under use	ICAR
11.	Goatary unit								
12.	Mushroom Lab								

13.	**Mushroom production unit**								
14.	**Shade house**								
15.	**Soil test Lab**					Totally completed	26.00	Under use	ICAR
16.	(Others, Please Specify) Portable Carp Hatchery for Fish Breeding					Totally completed	15.00	Under use	ICAR
17.	(Others, Please Specify) Duckery unit					Totally completed	80.00	Under use	ICAR
18.	(Others, Please Specify) Plant Diagnostic Laboratory					Totally completed	25.00	Under use	ICAR

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total km. Run	Present status
Motor Bike (Rajdoot)	1997	32,000.00	39,013	Not in running condition
Moped (Toro Jaz)	1997	12,500.00		Not in running condition
Multi Utility Vehicle (Bolero Plus)	2010	5,20,495.00	1,33,438	In running condition
Motor Bike (Hero Splendor Pro)	2016	59,223.00	5,146	In running condition
Scooter (Hero Edge LX)	2016	60,323.00	2,785	In running condition

C) Equipment & AV aids

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
a. Lab Equipment				
Desiccators	1995-96	1540.00	Working condition	ICAR
Sewing machine	1995-96	3605.60	Working condition	ICAR
Mixer cum grinder	1995-96	3430.50	Working condition	ICAR
Weighing balance	1995-96	1700.00	Working condition	ICAR
Mixer grinder Kenstar	2004-05	5,000.00	Working condition	ICAR
Refrigerator Whirlpool	2004-05	16,750.00	Working condition	ICAR
Stabilizer Fizi	2004-05	2450.00	Working condition	ICAR
Shaker	2004-05	24500.00	Working condition	ICAR
Oven	2004-05	9000.00	Working condition	ICAR

Kelplus Digestation System Model KES 08L	2004-05	85,719.00	Working condition	ICAR
Kelplus Distillation System Elite Ex	2004-05	1,38,943.00	Working condition	ICAR
Systronics Micro controller based visible spectra-photometer	2004-05	53,064.00	Working condition	ICAR
Systronics P-H system	2004-05	21,582.00	Working condition	ICAR
Systronics Digital conductivity meter	2004-05	15,444.00	Working condition	ICAR
Systronics Flame photometer Type 128	2004-05	73405.00	Working condition	ICAR
Hotplate with energy regulator	2004-05	2,340.00	Working condition	ICAR
Glass distillation apparatus flux	2004-05	15,617.00	Working condition	ICAR
Physical balance cap.250g with weight box	2004-05	6,310.00	Working condition	ICAR
Shimadzu Electronic Balance	2004-05	66,254.00	Working condition	ICAR
Kjeldal digestion unit	2004-05	6,205.00	Working condition	ICAR
Kjeldal distillation unit	2004-05	10,411.00	Working condition	ICAR
Microscope- Trinocular	2010-11	47,069.00	Working condition	ICAR
Microscope – Stereo	2010-11	21,055.00	Working condition	ICAR
BOD incubator	2010-11	39,132.00	Working condition	ICAR
Autoclave- Vertical	2010-11	21,814.00	Working condition	ICAR
Centrifuge	2010-11	14,200.00	Working condition	ICAR
Microscope Image Projection System (MIPS)	2010-11	31,885.00	Working condition	ICAR
Laminar Flow	2010-11	53,465.00	Working condition	ICAR
Desiccators	2010-11	6,072.00	Working condition	ICAR
Rotary Shaker	2010-11	21,700.00	Working condition	ICAR
Digital Weighing machine	2010-11		Working condition	ICAR
Soil Testing Mini-Lab Mridhaparikshak Solar Operated	2015-16	70,000.00	Working condition	ICAR
Soil Testing Mini-Lab Mridhaparikshak Solar Operated	2016-17	86,000.00	Working condition	ICAR
Bardizzo Castrator	2016-17	1,600.00	Working condition	ICAR
Auto Vaccinator	2016-17	3,400.00	Working condition	ICAR
pH. Meter	2016-17	1,431.00	Working condition	ICAR
Room Thermometer	2016-17	295.00	Working condition	ICAR
Stethoscope	2016-17	500.00	Working condition	ICAR
Dissolved Oxygen Meter	2016-17	12,022.00	Working condition	ICAR
pH. Meter	2016-17	1,431.00	Working condition	ICAR
Digital Electronic Balance (5.0 mili grams – 300.00 grams)	2016-17	13,400.00	Working condition	ICAR
b. Farm machinery				
Tractor Model Mahindra B 275 – DI	1998-99	2,99,496.00	Working condition	ICAR

Power Tiller Model Kamco KMB 200	2001-02	99,672.00	Working condition	ICAR
Rotavator Model 5/540 R	2012-13	59,000.00	Working condition	ICAR
Bench Floor Scale (Capacity – 200 kg) Model Sana	2010-11	8,000.00	Working condition	ICAR
Precision Scale (Capacity – 600 gms) Model Sana	2010-11	11,200.00	Working condition	ICAR
Portable Carp Hatchery	2010-11	2,21,956.00	Working condition	ICAR
Seed Processing Machine Model 15X/C.H. Standard Capacity 1.5 ton / Hour	2015-16	2,57,800.00	Working condition	ICAR
Elevator 16 Feet complete with 1.5 HP 440 Volt Electric Motor	2015-16	55,000.00	Working condition	ICAR
Mini Grinder	2015-16	73,500.00	Working condition	ICAR
Palletizer Machine	2015-16	39,900.00	Working condition	ICAR
Generator 15 KVA 3 Phase Model CD- 15 of Copper Corporation	2015-16	3,95,025.00	Working condition	ICAR
Laptop HP G 240	2015-16	43,000.00	Working condition	ICAR
Desktop All-in-One HP 20	2015-16	44,430.00	Working condition	ICAR
UPS APC 600 VA	2015-16	2,300.00	Working condition	ICAR
Printer Laserjet M 126 nw	2015-16	12,900.00	Working condition	ICAR
c. A-V Aids				
Overhead Projector	1994-95	24,477.55	Working condition	ICAR
Sony TV	1998-99	20999.00	Working condition	ICAR
Sony audio system	1998-99	5,990.00	Working condition	ICAR
Sharp VCR	1998-99	13,750.00	Working condition	ICAR
Slide projector	2001-02	14,672.00	Working condition	ICAR
PA system			Working condition	ICAR
Amplifier	2001-02	6400.00	Working condition	ICAR
Microphone ASM580	2001-02	2700.00	Working condition	ICAR
Microphone ACM66	2001-02	1300.00	Working condition	ICAR
Speaker	2001-02	2500.00	Working condition	ICAR
DGT stand	2001-02	290.00	Working condition	ICAR
DGN stand	2001-02	490.00	Working condition	ICAR
LCD projector	2008-09	99,990.00	Working condition	ICAR
Camera	2008-09	23,900.00	Working condition	ICAR
d. Office Equipments				
Word processor	1995-96	2,100.00	Working condition	ICAR
Canon photo copier	2003-04	69,988.00	Not in working condition	ICAR
Stabilizer 2KVA	2003-04	4,000.00	Working condition	ICAR
Generator	2008-09	49,500.00	Working condition	ICAR
Finger Print based Attendance Register Eurovigil I	2015-16	20,600.00	Working condition	ICAR

Deter 200				
Printer HP L3 1020 Plus	2015-16	8,200.00	Working condition	ICAR
Canon Photo Copier Image RUNNER 2004 N	2016-17	80,273.00	Working condition	ICAR
Desktop Computer Intel Core I 5 Processor with UPS 600 VA	2017-18	47,700.00	Working condition	ICAR
Laptop HP Intel Core I 3 Processor	2017-18	48,900.00	Working condition	ICAR
HP Colour Desk Jet Printer 5821	2017-18		Working condition	ICAR

D) Farm implements

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
ASPEE Sprayer (10 liters)	1995 - 96	2,050.00	Working condition	ICAR
ASPEE Hand Sprayer	1995 - 96	1,090.00	Working condition	ICAR
Paddy Thresher	1995 - 96	4,000.00	Working condition	ICAR
Hand Rotary Duster	1995 - 96	650.00	Working condition	ICAR
Spray Machine 16 lit. Capacity PVC Burret	2009-10	2,300.00	Working condition	ICAR
Mould Board Plough Model – Bengal Motor Works	2009 - 10	30,000.00	Working condition	ICAR
Mounted Offset 10”X20” Disc Harrow Model – Bengal Motor Works	2009 - 10	35,000.00	Working condition	ICAR
Self Propelled Power Ripper Model Kumco KB - 120	2010 - 11	81,156.00	Working condition	ICAR
Zero Tillage Machine 11 Tynes	2010 - 11	40,000.00	Working condition	ICAR
ConoWeeder	2012 - 13	Free Supply	Working condition	ICAR
Drum Seeder	2012 – 13	Free Supply	Working condition	ICAR

1.8. Details SAC meeting* conducted in the year

Sl. No.	Date	Number of Participants	Salient Recommendations	Action taken	If not conducted, state reason
1.	26.03.2019.	18	A. Organisation of collaborative programme with D.T.C. of DRDC, Birbhum in Animal Science for Farm Women.	SAC meeting was conducted on 26.3.2019. Work recommended is in progress in the financial year of 2019-20.	Not Applicable.
			B. Inclusion of the Benefit Risk ratio in OFT on Plant Protection.		
			C. Establishment of a crop museum contained with different crops of new varieties.		
			D. More numbers of training programmes of Horticulture with the help of Dept. of CIHAB, Palli Siksha Bhavana, Visva-Bharati.		
			E. More numbers of training programmes on quality Seed Production.		
			F. More numbers of training programmes on Organic Input Production.		

			G. Trial on liming on other crops may be conducted with the help of ATMA, Birbhum.		

**** Salient recommendation of SAC in bullet form***

2.a. District level data on agriculture, livestock and farming situation (2018-19)

2.a.1 Major Farming system/enterprise

Sl. No.	Farming System/Enterprise
1.	**Upland**- Paddy, red gram, fruit crops
2.	**Mediumland**- Paddy, mustard, potato, sugarcane, sesame, black gram, vegetables, fruit crops, cow, goat, backyard poultry, fishery
3.	**Lowland**- Paddy, sugarcane, wheat, potato, vegetables, duckery, fishery

2.a.2 Agro-climatic Zone

Agro Ecological Sub Region (ICAR):- Assam and Bengal Plain, Hot Sub-humid to Humid (Inclusion of Per-humid) Eco-Region. (15.1)

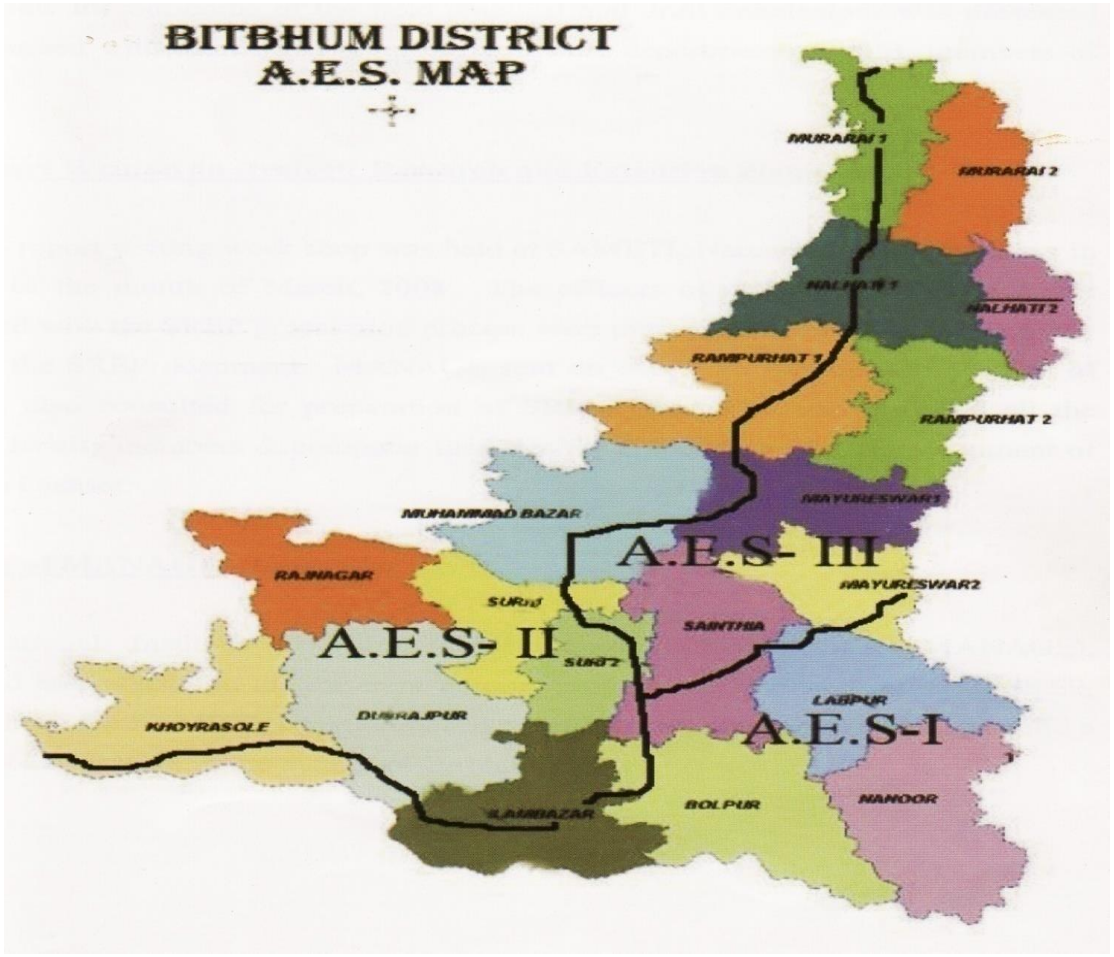
Eastern plateau (Chotanagpur) And Eastern Ghats, Hot Sub-humid Eco-Region (12.3)

Agro-Climatic Zone (Planning Commission):- Lower Gangetic Plain Region (III)

Agro Climatic Zone (NARP):- Red and lateritic Zone (WB-5)

2.a.3 Agro-ecological situation

The Birbhum District is divided into three Agro-Ecological Situation viz. AES – I, AES – II and AES – III. The Rathindra KVK is situated in the AES – I. The Map and detailed features of the Ago-ecological Situations of the District of Birbhum are given here under.



Source: - **SREP, Birbhum – 2009.**

Agro-ecological Situations of the District of Birbhum

Characteristics	AES – I	AES – II	AES – III
Blocks covered	Blocks under this AES are Bolpur-Sriniketan, Nanoor, Sainthia, parts of Mayureswar – I and Mayureswar – II. parts of Labhpur, Illambazar	Blocks under this AES are Rajnagar, Dubrajpur, Khyrasole, parts of Nalhati – I, Rampurhat – I, Murarai – I, Mayureswar – I, Illambazar, Labhpur,	Blocks under this AES are Rampurhat – II, parts of Murarai – I, Murarai – II, Nalhati I, Nalhati – II, Md. Bazar, Suri – I and Suri – II.

		Suri – I and Md. Bazar.	
Soil Type	Fertile loamy clay soil, 60 percent of cultivable area under loam – clay loam soil. pH – 4.5 – 6.5	Sandy to sandy clay soil. 80 percent of cultivable area under clay soil and slightly acidity problem soil. pH – 5.2 – 6.5	Clay to clay loam soil. 70 percent clay soil with 30 percent loam to clay loam soil. pH – 4.8 – 6.5
Irrigation	75 percent of the total cultivable area is under irrigation out of which 51 percent of area is under surface irrigation.	30 percent of the total cultivable area is under irrigation out of which 20 percent of the area is irrigated from surface water and the rest area is irrigated from minor irrigation sources. Ground water is not easily available.	70 percent of the total cultivable area is under irrigation out of which 60 percent of the area is irrigated from available groundwater. Surface irrigation area is only 10 percent. Ground water is easily available for irrigation purpose.
Important River	Ajoy, Mayurakshi, Dwaraka, Kopai	Hinglow, Bakreswar, Shaal, Ajoy, Chandrabhaga	Dwaraka, Brahmani, Mayurakshi, Pagla, Bansloi
Flood / Draught Proneness	Moderate flood prone area	Moderate draught prone area	Flood prone area
Available Water Area for Fish Cultivation	30 percent of ponds of the district of Birbhum are situated. Sweet water is available for fisheries.	20 percent of ponds of the District of Birbhum are under this AES. A vast sweet water resource is available for fish cultivation.	50 percent of the ponds of the District of Birbhum are under this AES. Sweet water area is available for fish cultivation.
Animal Resources	20 percent of the total Milch Cows of the District of Birbhum is available under this AES out of which upgraded Breed percentage is only 5 percent. Only 15 percent of the total Goat population of the District of Birbhum and 30 percent of the Poultry Population of the District of Birbhum are available in this AES.	50 percent of the total Milch Cows of the District of Birbhum is available under this AES out of which upgraded Breed percentage is only 5 percent. 60 percent of the total Goat population of the District of Birbhum and 40 percent of the Poultry Population of the District of Birbhum are available in this AES.	30 percent of the total Milch Cows of the District of Birbhum is available under this AES out of which upgraded Breed percentage is only 5 percent. Only 25 percent of the total Goat population of the District of Birbhum and 30 percent of the Poultry Population of the District of Birbhum are available in this AES.
Major Crops:			
Paddy -	Pre-Kharif, Kharif and Boro Paddy	Pre-Kharif, Kharif and Boro Paddy	Pre-Kharif, Kharif and Boro Paddy
Oil Seeds –	Mustard, Groundnut and Sesame	Mustard and Groundnut and Sesame in limited areas.	Mustard, Groundnut and Sesame
Pulses –	Black and Green Gram, Lentil, Bengal Gram, Kulthi	Khesari, Black and Green Gram, Lentil, Bengal Gram, Kulthi	Black Gram and Green Gram
Vegetables –	Seasonal vegetable round the year	Seasonal vegetables round the year	Seasonal vegetables round the year

Fruits -	Mango, Guava, Citrus, Banana, Coconut	Mango, Guava, Citrus, Banana, Coconut	Mango, Guava, Citrus, Banana, Coconut.

Source: - SREP, Birbhum – 2009.

2.a.4 Soil Type

The predominant soil types are old alluvial and red lateritic with low to medium in organic carbon and phosphate content and medium to high in potash. The soil is acidic in nature with pH. range of 5.0 to 6.5.

This district (Birbhum) is enriched by various types of soil namely, Metal (Clay soil retentive of moisture which is best suited for growing winter paddy, sugarcane, wheat, gram and kalai); Ental (a sticky brownish clay, it is poor soil and is capable of producing paddy only if manured); BaghaEntal (ental having colour or tiger, it is poor soil capable of producing paddy only if manured); Beley (is a whitish loose and poor soil , capable of growing paddy and vegetable); Kankure ((it is a redish, loose laterite soil capable of growing bajra, maize, kurthi, bean and marual); Bastu (it is a blackish friable rich soil and is largely used for rabi crops); Bindi (it is a poor sandy soil which improves with continued cultivation, capable of producing paddy but can also grow rabi crops if irrigated); RetiRfi (is lighter variant of Pali, it does not grow paddy it is best suited for vegetables, wheat, barley etc.) Pali(deposit of soil is bed of river or in areas subject to riverine inundation; it is very rich soil and is well suited for sugarcane, wheat, gram, potato and other vegetables. It is generally reserved for more valuable crops rather than paddy).

2.a.5 Productivity of major 2-3 crops under cereals, pulses, oilseeds, vegetables, fruits and others

Coverage , Productivity and Production of
Major Crops of Birbhum
80

		2011-12			2012-13			2013-14			2014-15			2015-16		
Name of Crop	Normal Target (Ha)	Coverage(Ha)	Yield (Kg/Ha)	Production (MT)	Coverage (Ha)	Yield (Kg/Ha)	Production (MT)	Coverage (Ha)	Yield (Kg/Ha)	Production (MT)	Coverage (Ha)	Yield (Kg/Ha)	Production (MT)	Coverage (Ha)	Yield (Kg/Ha)	Production (MT)
Aman Paddy	305000	302132	4310.6	1302382.3	282951	4369.73	1236419.5	271412	4253.28	1154391	294874	4150.3	1223801	295115	4790.2	1413660
Aus Paddy	5200	3767	3803	14325.901	3500	3592	12572	3540	3666.66	12980	3497	3775.2	13201.7	3305	3735.83	12346.92
Boro Paddy	68650	61224	4750	290814	53473	4867	260253.09	79310	5139.00	407574	67451	5210.8	351474	65120	5139	334651.7
Rabi Maize	390	119	930	110.67	61	945	57.645	9	940	8.46	85	905	76.925	250	975.15	243.7875
Summer Maize	950	75	1600	120	31	1626	50.406	114	1623	185.022	120	1580	189.6	450	1755	789.75
Kharif Maize	450	356	1050	373.8	375	1140	427.5	400	1205.00	482	427	1235	527.345	450	1340	603
R-S Ground Nut	100	73	1038	75.774	47	1035	48.645	46	1037	47.702	190	1050	199.5	254	975.75	247.8405
Mustard	42800	31840	1096	34896.64	32100	1103	35406.3	31690	1141	36158.3	32115	1165	37414	33325	1150	38323.75
Linseed	1490	821	588.5	483.1585	666	592	394.272	582	600	349.2	412	615.25	253.483	393	605.35	237.9026
Sunflower	430	44	950	41.8	75	545	40.875	56	586	32.816	71	595.25	42.2628	60	875	52.5
Sesamum	7150	5120	962	4925.44	5350	952	5093.2	4382	933	4088.41	4670	945.15	4413.85	5025	957.25	4810.181
Arhar	600	576	617	355.392	534	620	331.08	516	622	320.952	388	635	246.38	388	647.25	251.133
Lentil	10000	6570	618	4060.26	10026	623.3	6249.2058	10908	830	9053.64	10530	825	8687.25	13170	785	10338.45
Khesari	4185	1834	617	1131.578	1831	625	1144.375	1815	638	1157.97	1675	645.25	1080.79	2265	635.45	1439.294
Gram	19900	10750	948	10191	13415	973	13052.795	11206	967	10836.2	10145	978	9921.81	12240	985	12056.4
Pea	855	471	625.7	294.7047	538	635	341.63	513	651	333.963	520	660.15	343.278	550	662.18	364.199
S/Moong	1800	1036	605	626.78	1918	598.3	1147.5394	1947	540	1051.38	1455	575.25	836.989	1970	915	1802.55
S/Kalai	950	375	785	294.375	450	805	362.25	520	865	449.8	660	885.15	584.199	625	955.1	596.9375
Bhadoi Kalai	1500	1240	408	505.92	1321	502	663.142	1052	622	654.344	1085	640	694.4	1125	665	748.125
Kulthi & otherPulse	180	179	403	72.137	138	406.6	56.1108	94	420	39.48	99	475	47.025	100	485	48.5
Potato	23300	17930	27304	4895535.5	19120	28432	543619.84	18795	23314.4	438194	19300	25251	487339	19485	27695	539637.1
Wheat	47100	30440	2929	89158.76	30810	2986	91998.66	28720	3044	87423.7	33000	3075	101475	39155	2950.2	115515.1
S/Cane	1850	1759	77373	136099.11	1722	77233	132995.23	1520	77817	118282	1269	76685	97313.5	1250	77612	97015

Source – Dept. of Agriculture, Birbhum District, Govt. of West Bengal.Internet Source - DDA,%20Birbhum.html

Horticultural Development in Major Crops in Birbhum District in Terms of Area and Yield

Major fruits and vegetables						
Crops	**2004 -2005**		**2006 - 2007**		**2012 - 2013**	
	Area (ha)	**Productivity (q/ha)**	**Area (ha)**	**Productivity (q/ha)**	**Area (ha)**	**Productivity (q/ha)**
Tomato	1680.00	55.00	1860.00	140.80		
Tomato (Winter)					900.00	164.45
Tomato (Spring)					1050.00	163.81
Cabbage	2370.00	86.00	2550.00	363.60		
Cabbage (Winter)					1200.00	267.00
Cauliflower	2130.00	52.00	2170.00	157.50		
Cauliflower (Winter)					1300.00	184.23
Cauliflower (Spring)					900.00	183.89
Peas					800.00	41.00
Brinjal	6410.00	87.00	6850.00	120.40		
Brinjal (Rainy)					2400.00	116.67
Brinjal (Winter)					5300.00	215.00
Brinjal (Summer)					2600.00	112.39
Cucurbits	8340.00	121.00	8280.00	144.20		
Cucurbits (Rainy)					300.00	100.00
Cucurbits (Winter)					900.00	177.78
Cucurbits (Summer)					8200.00	147.56
Onion	1090.00	70.00	1380.00	72.90	1455.00	112.37
Lady’s Finger (Rainy)					1520.00	90.13
Lady’s Finger (Winter)					420.00	100.00
Sweet Potato					850.00	220.59
Beans					760.00	31.19
Radish (Winter)					600.00	133.33
Radish (Spring)					1230.00	121.95
Watermelon					1000.00	160.00
Elephant’s Foot Yam					830.00	234.94
Arum					750.00	142.67
Leafy Vegetables (Rainy)					50.00	240.00
Leafy Vegetables (Winter)					40.00	200.00
Leafy Vegetables (Spring)					1000.00	70.00
Leafy Vegetables (Summer)					20.00	15.00
Others (Rainy)					4500.00	07.11

Others (Winter)					3900.00	15.77
Others (Spring)					1150.00	15.04
Others (Summer)					3000.00	09.83
Misc. Vegetables	10350.00	14.90	22000.00	51.90		
Total Vegetables	**32370.00**	**56.00**	**45100.00**	**100.60**		
Total Vegetables (Rainy)					**10350.00**	**76.62**
Total Vegetables (Winter)					**15360.00**	**149.98**
Total Vegetables (Spring)					**8230.00**	**136.68**
Total Vegetables (Summer)					**18737.50**	**111.93**
Mango	820.00	120.00	917.00	142.50	1640.00	58.54
Banana	520.00	80.00	650.00	159.50	950.00	137.38
Guava	770.00	110.00	943.00	150.60	1205	146.47
Pine Apple					05.00	180.00
Papaya					615.00	285.90
Jack Fruit					80.00	107.50
Litchi					50.00	48.00
Mandarin Orange						
Other Citrus					620.00	61.29
Sapota					190.00	105.00
Temperate Fruits						
Misc. Fruits	1100.00	140.00	1487.00	148.60	280.00	82.14
Total Fruits	**3210.00**	**45.00**	**3997.00**	**149.50**	**5635.00**	**119.20**
Chilli	240.00	30.00	460.00	89.80		
Ginger	550.00	50.00	710.00	96.80		
Turmeric	320.00	10.00	480.00	35.20		
Total Flower	**6500.00**	**46.20 lakh spikes**	**95430.00**	**69.6 lakh spikes**	**Not Available**	**Not Available**

Source: - Dept. of Horticulture and Food Processing Industries, Govt. of West Bengal.

2.a.6 Mean yearly temperature, rainfall, humidity of the district

The temperature varies from 12.7˚C to 28.3˚C in winter and from 25.5˚C to 41.5˚C in summer. The average rainfall is 1430 mm (**Source: -** http://www.birbhum.gov.in/DDAgri/ddadmin.htm).

The climate of the district is generally dry, mild and healthy. The hot weather usually last from the middle of March to the middle of the June, the rainy season from the middle of June to the middle of October, and the cold weather from middle of October to the middle of March. They do not always correspond to this limit. As a rule, the wind is from south-east in summer and from the north-west in winter.

Summer Temperature: Max: 40^0 C

Winter Temperature: Min: 10^0 C

Rain Fall (RF) (Ten Years Average 1998-2007):-

SW Monsoon (June - September): 1196.1 Normal RF (mm)

NE Monsoon (October - December): 152.3 Normal RF (mm)

Winter (January - March): 67.1 Normal RF (mm)

Summer (April - May): 157.4 Normal RF (mm)

Annual: 1572.9 Normal RF (mm)

Normal Onset of Monsoon: 1st. week of June

Normal Cessation of Monsoon: 4th. week of September

Maximum and Minimum Temperature by Month in the District of Birbhum

Centre : Suri(Degree Celsius)										
Month	Year									
	2008		2009		2010		2011		2012	
	Maxi	Mini	Maxi	Mini	Maxi	Mini	Maxi	Mini	Maxi	Mini
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
January	31	7	29	10	29	7	29	6	28	7
February	32	7	35	11	33	11	35	11	35	8
March	39	16	37	14	42	17	40	12	40	13
April	42	19	43	19	46	20	39	19	41	19
May	42	21	42	20	39	21	38	20	45	22
June	38	23	42	22	43	22	39	24	46	24
July	35	24	37	25	37	25	36	23	38	24

August	35	24	37	24	36	24	37	24	35	24
September	35	24	36	24	35	23	36	23	..	..
October	34	19	34	16	35	18	34	16	35	16
November	32	13	34	11	34	14	32	14	32	11
December	31	11	29	8	29	8	30	7	30	7

[Source: - Bureau of Applied Economics and Statistics (BAES), 2011-12, Govt. of West Bengal]

Mean Maximum and Mean Minimum Temperature by Month in the District of Birbhum

Centre : Suri(Degree Celsius)										
Month	Year									
	2008		2009		2010		2011		2012	
	Mean Maxi	Mean Mini	Mean Maxi	Mean Mini	Mean Maxi	Mean Mini	Mean Maxi	Mean Mini	Mean Maxi	Mean Mini
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
January	25	12	27	13	24	9	24	10	24	12
February	27	13	30	14	29	14	29	14	29	14
March	34	20	34	19	36	20	34	20	34	19
April	37	23	39	24	40	25	35	22	37	23
May	37	25	36	25	35	25	35	24	39	26
June	33	26	38	27	36	26	35	26	39	27
July	33	26	33	26	33	26	34	26	33	26
August	33	26	33	26	33	26	32	26	33	26
September	33	25	33	25	33	25	32	25	..	..
October	32	22	32	21	32	23	33	23	32	21
November	30	17	29	17	31	19	30	17	28	16
December	26	14	27	12	26	12	26	12	25	12

[Source: - Bureau of Applied Economics and Statistics (BAES), 2011-12, Govt. of West Bengal]

Birbhum District Weather By Month // Weather Averages

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature (°C)	19	21.5	26.9	30.8	30.7	30.7	28.9	28.8	28.8	27.3	23	19.6
Min. Temperature (°C)	12	14.4	19.4	23.7	25.5	26.2	25.7	25.7	25.4	23	17	12.9
Max. Temperature (°C)	26	28.6	34.4	38	35.9	35.2	32.2	32	32.3	31.7	29.1	26.3
Avg. Temperature (°F)	66.2	70.7	80.4	87.4	87.3	87.3	84.0	83.8	83.8	81.1	73.4	67.3
Min. Temperature (°F)	53.6	57.9	66.9	74.7	77.9	79.2	78.3	78.3	77.7	73.4	62.6	55.2
Max. Temperature (°F)	78.8	83.5	93.9	100.4	96.6	95.4	90.0	89.6	90.1	89.1	84.4	79.3
Precipitation / Rainfall (mm)	12	21	24	41	88	239	295	275	170	105	12	5

The precipitation varies 290 mm between the driest month and the wettest month. The variation in temperatures throughout the year is 11.8 °C.

Source: https://en.climate-data.org/asia/india/west-bengal/bolpur-767407/

2.a.7 Production of major livestock products like milk, egg, meat etc.

Details of Live-Stock and Poultry in the District of Birbhum

(Number)

Category		Year - 1989	Year - 1994	Year - 1997	Year - 2003	Year - 2007	Year 09-10	Year 10-11	Year 11-12
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Cattle:								
	Cows	255381	266217	274094	282145	372662			
	Bulls and Bullocks	307844	347593	357919	294845	308308			

	Young Stock	328898	381066	392321	421336	452384			
	Total Cattle	892123	994876	1024334	998326	1133354	1163975	1180031	1196623
2	Buffaloes:								
	Cows	7627	7043	7132	8688	23492			
	Bulls and Bullocks	37258	45182	45753	47100	44088			
	Young Stock	6685	8076	8178	11075	..			
	Total Buffaloes	51570	60301	61063	66863	67580	63120	61002	58955
3	Sheep	163854	189122	189214	186280	216888	229300	235770	242422
4	Goats	598010	736251	816123	728113	941989	1066464	1134740	1207387
5	Horses and ponies	366	96	96	59	39	30	26	23
6	Pigs	77437	77572	83653	57680	49177	46814	45676	44565
7	Other Live-stock	..	..	. .	87735	93849	98391	100786	103280
	Total Live-stock	1783360	2058218	2174483	2125056	2502876	2668094	2758031	2853255
8	Poultry :								
	Fowls	1489187	1506982	1659044	2303418	3071493	3753562	4222424	4805424
	Ducks	828231	1076333	1218849	1274104	1150029	1165248	1097777	1086352
	Others	11275	20416	10514	3135	1609	1591	1582	1573
	Total Poultry	2328693	2603731	2888407	3580657	4223131	4920401	5321783	5893349

Source: - Live-Stock Census Report, Govt. of W. B. and Annual Administrative Reports of Animal Resources Development Department, Govt. of West Bengal.

Estimated Production of Milk (Cow, Buffalo and Goat) and Egg (Hen and Duck) in Birbhum District

Year	Milk (thousand tonnes)		Egg (number in thousands)	
	District	West Bengal	District	West Bengal

(1)	(2)	(3)	(4)	(5)
2003-04	97	3686	169883	2820317
2004-05	99	3790	175916	2887649
2005-06	100	3892	182064	2963720
2006-07	119	3984	233971	3038645
2007-08	119	4077	238117	3057342
2009-10	121.785	4300.17	290847	3697840
2010-11	123.605	4472.20	320083	4001062
2011-12	126.139	4660.23	347536	4337272
2012-13	128.518	4860.02	379785	4707268
2013-14	126.500	4906.21	386015	4746013

Source: - Live-Stock Census Report, Govt. of W.B. and Annual Administrative Reports of Animal Resources Development Department, Govt. of West Bengal.

Production of Meat and Wool in the District of Birbhum

Sl. No.	Year	Meat Production (Metric Ton)	Wool Production (Metric Ton)
01.	2009-10	22177	108.373
02.	2010-11	23464.05	109.586
03.	2011-12	24775.00	110.846
04.	2012-13	26000.00	112.345
05.	2013-14	26408.00	112.731

Source: - Live-Stock Census Report, Govt. of W.B. and Annual Administrative Reports of Animal Resources Development Department, Govt. of West Bengal.

Production Details of Fishery Sector in Birbhum District

 # Impounded Fresh Water Area (Including Beel and Bour) in Birbhum District in 2015-16: - 21,733.00 ha.

Source: - Handbook of Fisheries Statistics, 2015-16, September – 2016, Department of Fisheries, Directorate of Fisheries, Government of West Bengal, Meen Bhawan 31, GN Block, Sector —V Salt Lake City, Kolkata—700 091.

 # Total Impounded Water Area (By Satellite Imagery Analysis) in Birbhum District in 2014-15: -

i. No. of Water Area: - 91272

ii. Total Water Area (In ha.): - 22822

Sources: - Hand Book on GIS Based Mapping of Smaller Water Bodies and creation of Fisheries Database in West Bengal, under the Dept. of Fisheries, Govt. of W.B., 2015.

Fish Seed Production Details in Birbhum District: -

Sl. No.	Year	Production (Unit in Million Numbers)
01.	2011-12	135
02.	2012-13	125
03.	2013-14	125
04.	2014-15	127
05.	2015-16	139

Source: - Handbook of Fisheries Statistics, 2015-16, September – 2016, Department of Fisheries, Directorate of Fisheries, Government of West Bengal, Meen Bhawan 31, GN Block, Sector —V Salt Lake City, Kolkata—700 091.

Fish Production Details in Birbhum District: -

Sl. No.	Year	Fish Production (Unit in Ton)	Prawn Production (Unit in Ton)	Total Production (Unit in Ton)
01.	2011-12	63353	00	63353
02.	2012-13	65913	12	65925
03.	2013-14	70329	16	70345
04.	2014-15	69748	16	69764
05.	2015-16	71840	15	71855

Source: - Handbook of Fisheries Statistics, 2015-16, September – 2016, Department of Fisheries, Directorate of Fisheries, Government of West Bengal, Meen Bhawan 31, GN Block, Sector —V Salt Lake City, Kolkata—700 091.

2.b. Details of operational area / villages (2018-19)

Sl. No.	Name of Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified (Crop wise)	Identified Thrust Areas
1.	Illumbazar	Illumbazar	Daranda	Rice, Wheat, Mustard, Potato, Red Gram, Black Gram etc.; Vegetable like Brinjal, Chilli, Tomato, Elephant Foot Yam, Cucurbits;Fruit plants like Mango, Guava, Papaya, Coconut, Banana etc. and Dairy, Goatery, Poultry, Duckery, Fishery,Batique work, Decorative Candle, Post Harvest Technology of fruits and vegetables, Health and Nutrition of Rural Women and Children; Crop Insurance, Group Formation, Market Led Extension, Marketing Mechanisms of Farm produces.	***Bio physical:*** **Low productivity of all major crops** • Poor and Marginal soil • Low yielding seeds and plants • Limited water resource for irrigation • Imbalanced use of manures and fertilizer • Inappropriate agronomic practices • Inappropriate horticultural practices • Indiscriminate use of chemical pesticide **Poor productivity of livestock** • Inadequate, descriptive and prolific breed • Poor health and management practices • Low quality feed **Poor fish productivity:** • Poor pond management • Poor quality fingerlings **Low income generation of rural women** • Lack of skill on income generating rural crafts • Lack of skill on fruits and vegetable preservation • Lack of skill on establishment of backyard nutrition garden **Poor health conditionof women and child** • Lack of nutritious food resources • Lack of skill on establishment of backyard nutrition garden ***Socio Economic:*** • Lack of knowledge about soil testing based fertilizer application • Lack of knowledge on good agronomic and horticultural practices • Lack of knowledge on care handling of plant protection equipments • Lack of knowledge on good dairy, goatery, poultry management practices • Multi ownership of ponds • Tendency to lease out ponds • Lack of knowledge on different income generating programme for women • Lack of knowledge on low cost nutritious food for women and child • Lack of credit facilities • Lack of Insurance facilities for Crops • Lack of Market Information of the produced products • Lack of Backward and Forward Linkages for the farmers and farm women	• Soil health management • Quality seeds/seedlings and saplings • Balanced crop nutrition • Good agronomic practices • Good horticultural practices • Appropriate Pest Management • Formation of Self Help Groups • Formation of Producers' Groups • Formation of Farmers Club • Organization of Exposure visits of Practicing Farmers, Farm Women and Rural Youths • Improved Extension Activities like Kissan Mobile Message Services • Improvement of livestock productivity • Enhancement of fish productivity • Improvement of women led vocation • Women and child care • Market led Extension
2.	Sattore	Bolpur - Sriniketan	Bishnubati			
3.	Sattore	Bolpur - Sriniketan	Asadullapur			
4.	Illumbazar	Immumbazar	Amkhoi			
5.	Shian - Muluk	Bolpur - Sriniketan	Dhanyasara			
6.	Shian - Muluk	Bolpur - Sriniketan	Durgapur			
7.	Bahiri-Panchshoya	Bolpur - Sriniketan	Chota-Shimulia			
8.	Albandha	Bolpur - Sriniketan	Domdoma			
9.	Albandha	Bolpur - Sriniketan	Debanandapur			

					• Lack of well established producers' Groups.	

2. c. Details of village adoption programme:

Name of the villages adopted by PC and SMS (2018-19) for its development and action plan

Name of village	Block	Action taken for development
Kapastikuri (Smt. R Addy)	Bolpur-Sriniketan	**A. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **B. Women Empowerment** through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening and Self Help Group formation. **C. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **D. Front Line Demonstrations (FLDs)** on Area Specific Mineral Mixture Supplement for Lactating Deshi Cow **E. Awareness Generation** of rural women on Health and Hygiene Issues. **F. On Farm Testing (OFT)** on Assessment of Various Component Combinations of Fish Feed **G. Front Line Demonstrations (FLDs)** on (i) Introduction of *Bhetki* as a Component if Composite Fish Culture.
Domdoma (Dr. S. Mandal)	Bolpur-Sriniketan	**A. Skill development Training Programmes** on Horticultural Crop diversification. **B. Skill development Training Programme** on Culture and Use of *Dhaincha* and *Azolla.* **C. Skill development Training Programme** on Nursery Pond Preparation, Composite Fish Culture, Fish Feed Management and Fish Disease Management. **D. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **E. Women Empowerment** through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening. **F. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **G. Front Line Demonstrations (FLDs)** on (i) Mustard Var. Pusa Bahar and Pusa Mahek and (ii) Wheat Var. HD – 2824. **H. Cluster Front Line Demonstrations (Cluster FLDs) on Mustard Var. Pusa Mahek.** **I. On Farm Testing (OFT)** on Assessment of Balanced N-P-K Management for Increasing Yield of Yellow Sarson **J. Awareness Generation** of rural women on Health and Hygiene Issues. **K. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.**
Debanandapur	Bolpur-Sriniketan	**A. Skill development Training Programmes** on Horticultural Crop diversification, Cultivation of Cucurbitaceous Crops, Cultivation of

(Sri S. Mondal)		Solanaceous Crops, Lay out and planting of Mango and Guava Orchards, Improved package and practices of Kharif Vegetables, Improved Method of Elephant Foot Yam Cultivation, Improved Production Practices of *Barmasia* Drum Sticks, Improved Production Practices of Low Volume High Value Crops like Capsicum, Broccoli etc. **B. Skill development Training Programmes** on Collection of Soil Sample for Soil Testing, Sowing and Phosphate Management in *Dhaincha*, Rice Seed Production Technology in Kharif Season and Cultivation of Rabi Crops with Especial Emphasis on Weed Management. **C. Skill development Training Programme** on Nursery Pond Preparation and Composite Fish Culture. **D. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **E. Women Empowerment** through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening. **F. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **G. Front Line Demonstrations (FLDs)** on (i) Dhaincha; (ii) Mustard Var. Pusa Bahar and Pusa Mahek; (iii) Wheat Var. HD – 2824; (iv) Elephant Foot Yam Var. Bidhan Kusum; (v) Drum Sticks Var. PKM – 1; (vi) Capsicum Var. Bharat and Mahabharat and (vii) Broccoli Var. Green Magic (F_1 Hybrid **H. On Farm Testing (OFT)** on Assessment of location specific Late Kharif or Early Winter Cabbage varieties and Assessment of location specific Late Kharif or Early Winter Cauliflower varieties **I. Awareness Generation** of rural women on Health and Hygiene Issues. **J. Vaccination Camp** for Cattles and Birds. **K. Animal Infertility Treatment Camp.** **L. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.**
Daranda (Dr. K. Mitra)	Bolpur-Sriniketan	**A. Skill development Training Programmes** on Horticultural Crop diversification, Cultivation of Cucurbitaceous Crops, Cultivation of Solanaceous Crops, Lay out and planting of Mango and Guava Orchards, Improved package and practices of Kharif Vegetables, Improved Method of Elephant Foot Yam Cultivation, Improved Production Practices of *Barmasia* Drum Sticks, Improved Production Practices of Low Volume High Value Crops like Capsicum, Broccoli etc. **B. Skill development Training Programmes** on Collection of Soil Sample for Soil Testing, Sowing and Phosphate Management in *Dhaincha* and Rice Seed Production Technology in Kharif Season. **C. Skill development Training Programme** on Nursery Pond Preparation, Composite Fish Culture, Portable Carp Hatchery, Fish Feed Management and Fish Disease Management. **D. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **E. Women Empowerment** through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening. **F. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **G. Front Line Demonstrations (FLDs)** on (i) Introduction of *Bhetki* as a component of Composite Fish Culture; (ii) Area Specific Mineral Mixture Supplementation for Deshi Milch Cows; (iii) *Dhaincha*; (iv) Mustard Var. Pusa Bahar and Pusa Mahek; (v) Breed Replacement of Poultry Birds in Back Yard Farming Situation by introducing Rhode Island Red (RIR); (vi) Wheat Var. HD – 2824; (vii) Elephant Foot Yam

		Var. Bidhan Kusum; (viii) Drum Sticks Var. PKM – 1; (ix) Capsicum Var. Bharat and Mahabharat and (x) Broccoli Var. Green Magic (F_1 Hybrid). **H. On Farm Testing (OFT)** on **(i)** Assessment of Various Component Combinations of Fish Feed; (ii) Assessment of location specific Late Kharif or Early Winter Cabbage varieties; (iii) Assessment of location specific Late Kharif or Early Winter Cauliflower varieties and (iv) Fish based Integrated Farming System (IFS). **I. Awareness Generation** of rural women on Health and Hygiene Issues. **J. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.**
Bishnubati (Dr. P. Ray)	Bolpur-Sriniketan	**A. Skill development Training Programmes** on Horticultural Crop diversification and Improved Production Practices of Low Volume High Value Crops like Capsicum, Broccoli etc. **B. Skill development Training Programmes** on Sowing and Phosphate Management in *Dhaincha* and Cultivation of Rabi Crops with special Emphasis on Weed Management. **C. Skill development Training Programme** on Nursery Pond Preparation, Composite Fish Culture, Portable Carp Hatchery, Fish Feed Management and Fish Disease Management. **D. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **E. Women Empowerment** through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening. **F. Formation of Two (02) Women led Self Help Groups (SHGs).** **G. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **H. Front Line Demonstrations (FLDs)** on (i) Introduction of *Bhetki* as a Component of Composite Fish Culture; (ii) Area Specific Mineral Mixture Supplementation for DeshiMilch Cows; (iii) Breed up-gradation of Poultry Birds through Introduction of Improved Birds like Rhode Island Red (RIR); (iv) Wheat Var. HD – 2824; (v) Capsicum Var. Bharat and Mahabharat; (ix) Broccoli Var. Green Magic (F_1 Hybrid); (vi) Fodder Oat Var. Kent and (vii) Fodder Rice Bean Var. Bidhan – 2. **I. On Farm Testing (OFT)** on (i) Assessment of Different Components Combination of Fish Feed as Growth Promoters in Carp Spawns and Fry Feed to Increase their Survival Rate to A Profitable Extent, (ii) Fish based Integrated Farming System and (iii) Evaluation of Performance of Different Components of Micro-Nutrients as Feed Supplementation for Goats. **J. Awareness Generation** of rural women on Health and Hygiene Issues. **K. Vaccination Camp** for Cattles and Birds. **L. Animal Health Camp.** **M. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.**

Amkhoi (Dr. M. Khan)	Bolpur-Sriniketan	**A. Skill development Training Programme** on Nursery Pond Preparation, Composite Fish Culture, Portable Carp Hatchery, Fish Feed Management and Fish Disease Management. **B. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **C. Women Empowerment** through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening. **D. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **E. Front Line Demonstrations (FLDs)** on (i) Mustard Var. Pusa Bahar and Pusa Mahek; (ii) Wheat Var. HD – 2824; (iii) Fodder Oat Var. Kent; (iv) Fodder Rice Bean Var. Bidhan – 2 and (v) Breed up-gradation of Poultry Birds through Introduction of Improved Birds like Rhode Island Red (RIR) . **F. Cluster Front Line Demonstrations (Cluster FLDs) on Sesame Var. Sabitri.** **G. Awareness Generation** of rural women on Health and Hygiene Issues. **H. Vaccination Camp** for Cattles and Birds. **I. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.**

2.1 Priority thrust areas

Sl. No.	Thrust Areas
1.	Crop diversification through introduction of pulses, oilseeds, major millets, horticultural crops like elephant's foot yam, drum stick and high value low volume horticultural products like capsicum, broccoli etc.
2.	Popularization of High Yielding Varieties (HYVs) of major crops like paddy, wheat, mustard, potato etc. as well as traditional varieties of those crop also.
3.	Cultivation of field crops which require least water in the Arid and Semi-Arid regions of the district and cultivation of suitable horticultural crops in those regions.
4.	Popularization of improved management practices of Animals and Fishes
5.	Women empowerment through Rural Crafts and Nutritional Management of Rural Women and Children
6.	Market led extension, crop insurance and institutional rural credit flow mechanism

3. TECHNICAL ACHIEVEMENTS

3. A. Details of target and achievement of mandatory activities by KVK during the year

OFT													FLD										
No. of technologies tested:													No. of technologies demonstrated:										
Number of OFTs		Number of farmers											Number of FLDs		Number of farmers								
Target	Achievement	Target	Achievement										Target	Achievement	Target	Achievement							
			SC		ST		Others		Total							SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T					M	F	M	F	M	F	M	F	T
08	08	493	16	00	03	450	24	00	43	450	493		24	25	1200	229	152	191	107	344	250	764	509	1273

Training												Extension activities										
Number of Courses		Number of Participants										Number of activities		Number of participants								
Target	Achievement	Target	Achievement									Target	Achievement	Target	Achievement							
			SC		ST		Others		Total						SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T				M	F	M	F	M	F	M	F	T
97	108	2742	345	170	401	396	1976	238	2722	804	3526	300	384	4000	754	335	760	337	2104	934	3618	1606	5224

Impact of capacity building											Impact of Extension activities										
Number of Participants trained		Number of Trainees got employment (self / wage/ entrepreneur/ engaged as skilled manpower)									Number of Participants attended		Number of participants got employment (self/ wage/ entrepreneur/ engaged as skilled manpower)								
Target	Achievement	SC		ST		Others		Total			Target	Achievement	SC		ST		Others		Total		
		M	F	M	F	M	F	M	F	T			M	F	M	F	M	F	M	F	T
92	90	20	06	13	16	24	01	57	23	80	4000	5224	612	251	506	211	1343	584	2461	1046	3507

Seed production (q)		Planting material (in Numbers)	
Target	Achievement	Target	Achievement
A. Paddy: - 30.00	A. Paddy Var. Rani Dhan – 38.35 q	**A. Vegetable Seedlings – 10000**	A. Cabbage Var. Sonar – 8989 – 2000 in Numbers

B. Linseed: - 00.20 C. Elephant Foot Yam: - 01.00 D. Green Gram: - 00.20 **Grand Toal: - 31.40**	B. Paddy Var. Gotra Bidhan – 3 – 02.00 q C. Paddy Var. Radhunipagol – 01.00 q D. Ekangi (*K. galanga*) – 02.00 q E. Linseed Var. Sekhar – 00.40 q F. Elephant Foot Yam Var. Bidhan Kusum – 01.00 q G. Green Gram Var. Smrat – 00.28 q **Grand Total: - 45.03**	**in Numbers**	B. Tomato Var. PS – 31 – 3000 in Numbers C. Brinjal Var. Blue Master UT – 2000 in Numbers D. Chilli Var. Suryamukhi – 3000 in Numbers E. Broccoli Var. Green Magic – 1000 in Numbers **Grand Total: - 11000 in Numbers**

Livestock strains and fish fingerlings produced (in Numbers)		**Soil, water, plant, manures samples tested (in Numbers)**	
Target	**Achievement**	**Target**	**Achievement**
A. Japanese Quail (*Coturnix coturnix japonica)* – 200 in Numbers	A. Japanese Quail (*Coturnix coturnix japonica)* – 240 in Numbers	A. Soil Testing – 75 in Numbers	A. Soil Testing – 97 in Numbers
B. Indian Majot Carps (Table Fishes) – 01.00 q	B. Indian Majot Carps (Table Fishes) – 02.00 q	B. Water Testing – 70 in Numbers	B. Water Testing – 71 in Numbers
C. Exotic Carps (Table Fishes) – 01.00 q	C. Exotic Carps (Table Fishes) – 01.30 q		
D. Small Fishes for Table Use – 00.50 q	D. Small Fishes for Table Use – 00.68 q		
F. Spawns of Indian Major Carps – 5,00,000 in Numbers	F. Spawns of Indian Major Carps – 6,00,000 in Numbers		

Publication by KVKs							
Item	**Number**	**No. circulated**	**No. of Research papers in NAAS rated Journals**	**Highest NAAS rating of any publication**	**Average NAAS rating of the publications**	**Details of awarded publication, if any**	**Details of Award given to the publication**
Research paper	**03**		**03**	**6.23**	**5.01**		
Seminar/conference/ symposia papers	**01**						**The Paper, titled, "A Study on the Front Line Demonstration of White Pekin Duck reared under Farm Condition in Birbhum District of West Bengal", authored by Madhuchhanda Khan, Krishna Mitra and Ruma Addy and presented by Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science), Rathindra Krishi Vigyan Kendra, Palli Siksha Bhavana, Visva-Bharati was judged as Best Paper** and **Dr. Khan was awarded with "Best Paper Award"** by the Organizing Committee of the National Seminar on Sustainable Resource Management for enhancing Farm Income, Nutritional Security and Livelihood Improvement, organized by the Department of Agronomy, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum in collaboration with NABARD, Kolkata and in association with Indian Society of Agronomy – Sriniketan Chapter, Visva-Bharati at the Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, held from 01.02.2019 to 03.02.2019.
Books							
Bulletins							
News letter							
Popular Articles							
Book Chapter	**05**						
Extension Pamphlets / literature	**08**						
Technical reports	**94**						
Electronic Publication (CD/DVD etc)							
TOTAL	**111**						

1 Achievements on technologies assessed and refined

OFT-1

1.	**Title of On farm Trial**	Assessment of different micronutrients on productivity of Sesame in post rainy season
2.	**Problem diagnosed**	Low crop productivity due to low flower set and low pod filling of sesame in post rainy season
3.	**Details of technologies selected for assessment / refinement**	**Assessment** **Farmers' Practice :**NPK @ 30-15-15 kg/ha
		Technology Option -I: General recommendation (50-25-25 kg/ha) of NPK and spray of Zn , B and Mo
		Technology Option -II: Soil Testing based NPK and Spraying of Zn, B and Mo
		Technology Option - III: Soil Testing based NPK and soil application of Zn, B and Mo
4.	**Source of Technology (ICAR / AICRP / SAU / other, please specify)**	**Faculty of Agriculture of Central University** [M. Sc. and Ph. D. thesis of Soil Science and Agronomy Departments, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati during the period of the years of 2010-2016.]
5.	**Production system and thematic area**	Rice-fallow, sesame-fallow; Nutrient Management
6.	**Performance of the Technology with performance indicators**	Performance of the Technology with Soil Testing based NPK and Spraying of Zn, B and Mo was found statistically superior
7.	**Final recommendation for micro level situation**	Soil Test Based NPK application (Basal and topdressing) and Spraying of Micronutrient Zn, B and Mo as per requirement may be recommended for Sesame cultivation in post rainy season for lower flower drop, better pod filling and yield.
8.	**Constraints identified and feedback for research**	Collection of soil sample sometimes found difficult for heavy rain before the sowing time Use of other micronutrients may be tested in post rainy and also in summer season
9.	**Process of farmers' participation and their reaction**	Farmers actively participated in the day to day monitoring of the crop and data collection with KVK scientists. Farmers also incurred all the labour cost for cultivation

Thematic area: Nutrient Management (Post Rainy, 2018)

Problem definition: Low crop productivity due to low flower set and low pod filling of sesame in post rainy season

Technology assessed: Assessment of different micronutrients on productivity of Sesame in post rainy season

Table: Effect of different micronutrients on yield components, yield and economics of Sesame cultivation, var. Savitri in post rainy season

Technology option	No. of trials	Yield Component				Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net Return (Rs /unit)	BC Ratio
		No. of Branches per Plant	No. of capsules per plant	No. of Seeds per capsules	Test Weight (1000 Seed weight in gm)					
Farmers' Practice : NPK @ 30-15-15 kg/ha	5	3.15	75.25	28.68	2.66	7.75	13000	35650	22650	2.74
Technology Option-I: General recommendation (50-25-25 kg/ha) of NPK and spray of Zn , B and Mo		4.10	80.50	39.12	2.87	9.20	13900	42320	28420	3.04
Technology Option -II: Soil Testing based NPK and Spraying of Zn, B and Mo		6.20	95.12	43.25	3.41	11.00	14000	50600	36600	3.61
Technology Option - III: Soil Testing based NPK and soil application of Zn, B and Mo		5.35	87.25	41.15	3.30	9.95	14200	45770	31570	3.22
SEM+		0.102	0.615	0.340	0.011	0.124				
CD(P=0.05)		0.295	1.895	1.048	0.034	0.383				

Soil Analysis Report before sowing for NPK and micronutrient application

	N	P	K	Zn	B	Mo
Trial 1	175.8 Low	25.30 Low	240.8 Medium	0.95 High	44.1 High	0.33 Low
Trial 2	189.5 Low	27.25 Low	327.6 High	0.99 High	30.2 High	0.41 Low
Trial 3	262.2 Low	24.50 Low	251.2 Medium	0.14 Low	15.0 Low	0.18 Low
Trial 4	232.5 Low	26.55 Low	342.8 High	0.19 Low	14 Low	0.26 Low
Trial 5	230.8 Low	23.68 Low	258.5 Medium	0.15 Low	11 Low	0.15 Low

Result:

The result of the trial indicated that Technology Option –II i.e. Soil Testing based NPK and Spraying of Zn, B and Mo as per requirement produced significantly higher no. of branches per plant (6.2), no. of capsules per plant (95.12), no.of seeds per capsules (43.25), test weight (3.41 g) and BC ratio (3.61s) than those of Technology Option-III, Technology Option-I and farmers practice. This may be due to more absorption of micronutrients by plants in time due to spraying at 25 and 45 DAS. Cost of required micronutrient is lower in spraying than soil application. Due to soil testing all the nutrients and micronutrients were applied precisely and in balanced manner in Technology Option-II. Therefore, it may be concluded that Soil Test Based NPK application (Basal and topdressing) and Spraying of Micronutrient Zn, B and Mo as per requirement may be recommended for Sesame cultivation in post rainy season for lower flower drop, better pod filling and yield.

OFT – 2

1.	**Title of On farm Trial**	Assessment of liming dose in profitable manners in increasing productivity of Garden Pea
2.	**Problem diagnosed**	Due to lower soil pH (higher acidity), less flower and pod formation of Garden Pea is being noticed. According to farmers' practice, application of lime is not being performed. So yield of Garden Pea is low.
3.	**Details of technologies selected for assessment / refinement**	**Assessment** **Farmers' Practice :** No liming
		Technology Option - I **:** Lime as per soil testing
		Technology Option - II: Lime @ 10% of the Lime requirement as per soil testing
		Technology Option - III: Lime @ 20% of the Lime requirement as per soil testing
		(N. B.: - Recommended fertilizer dose will be applied in all the Technology Options including the Farmers' Practice.)
4.	**Source of Technology (ICAR / AICRP / SAU / other, please specify)**	**ICAR [**Managing Acid Soils for enhancing Productivity, P. D. Sharma and A. K. Sarkar (2005), Division of Natural Resource Management (NRM), Indian Council of Agricultural Research (ICAR), Krishi Anusandhan Bhawan – II, Pusa, New Delhi and published by the Director, ICAR-NBSS&LUP, Nagpur, Maharasthra.]
5.	**Production system and thematic area**	Paddy – Mustard; Soil Health Management
6.	**Performance of the Technology with performance indicators**	Technology Option-II i.e. Lime @ 10% of the lime requirement as per soil testing produced significantly better growth, yield components, yield and B:C ratio than other Technology Options and farmers practice in Garden Pea Cultivation managing acid soil economically.
7.	**Final recommendation for micro level situation**	Soil Test Based Limeapplication @ 10% of the lime requirement will produce significantly better growth, yield components, yield and B:C ratio than other Technology Options and farmers practice in Garden Pea Cultivation through management of acid soil economically.
8.	**Constraints identified and feedback for research**	Collection of soil sample sometimes found difficult for heavy rain before the sowing time
9.	**Process of farmers' participation and their reaction**	Farmers actively participated in the day to day monitoring of the crop and data collection with KVK scientists. Farmers also incurred all the labour cost for cultivation

Thematic area: Soil Health Management (Rabi, 2018-19)

Problem definition: Due to lower soil pH (higher acidity), less flower and pod formation of Garden Pea is being noticed. According to farmers' practice, application of lime is not being performed. So yield of Garden Pea is low.

Technology assessed: Assessment of liming dose in profitable manners in increasing productivity of Garden Pea

Table: Effect of liming dose on yield components, yield and economics of garden pea

Technology option	No. of trials	Yield Component			Yield (q/ha)	Cost of cultivation (Rs. / ha)	Gross return (Rs. / ha)	Net Return (Rs. / ha)	BC Ratio
		No. of Branches per Plant	No. of pods per plant	No. of Seeds per capsules					
Farmers' Practice : No liming	5	7.8	6.6	5.2	46.2	47384	92400	45016	1.95
Technology Option-I: Lime as per soil testing		10.2	9.6	5.8	70.5	67550	141000	73450	2.09
Technology Option -II: Lime @ 10% of the Lime requirement as per soil testing		12.8	11.4	6.9	88.5	51384	177000	1,25,616	3.44
Technology Option - III: Lime @ 20% of the Lime requirement as per soil testing		10.6	10.4	6.2	79.3	55384	158600	1,03,216	2.84
SEM+		0.408	0.304	0.094	2.067				
CD(P=0.05)		1.26	0.94	0.29	6.37				

(N. B.: - Recommended fertilizer dose were applied in all the Technology Options including the Farmers' Practice.)

	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
Initial soil pH	6.2	6.1	6.4	6.2	6.2

Result: The data indicated that Technology Option-II i.e. Lime @ 10% of the lime requirement as per soil testing produced significantly better growth, yield components, yield and B:C ratio than other Technology Options and farmers practice in Garden Pea Cultivation managing acid soil economically.

OFT – 3

1.	**Title of On farm Trial**	Assessment of profitability due to integration of different components under fish based production systems
2.	**Problem diagnosed**	Lack of technological knowhow in integration of components in proper way for higher profitability
3.	**Details of technologies selected for assessment/refinement**	**Assessment**

		Farmer's practice: Traditional fish farming
		I. composite fish culture (IMC) + Duck farming (30 nos.) + *Azolla* + Pulses (Redgram - Blackgram)
		II. composite fish culture (IMC) + Duck farming (30 nos.) + *Azolla* + Vegetables (Ladys' Finger -Capsicum)
4.	**Source of Technology (ICAR / AICRP / SAU / other, please specify)**	ICAR [DARE/ICAR Annual Report, 2008-09, Page12-14 &Fertiliser News, 46 (11), pp 53-55 & 57-58]
5.	**Production system and thematic area**	Fish based production system and Tematic Area: - Integrated Farming System
6.	**Performance of the Technology with performance indicators**	The result of the trial indicated that Technology Option –I i.e. Composite fish culture +Poultry farming +Azolla+ Pulses exhibited significantly higher BC ratio (2.93) than those of Technology Option-II (2.52) and farmers practice (1.21).
7.	**Final recommendation for micro level situation**	It may be recommended that integrated farming system with composite fish culture, duck farming, azolla and pulse cultivation in bank of the pond is very effective to integrate the components in profitable manner in Birbhum District.
8.	**Constraints identified and feedback for research**	The scientific management and monitoring and evaluation and record keeping of different components of the Integrated Farming System is complicated for general farmers to follow. Future Research focus should be on areas of simplification and calibration opf various models of IFS for different types of Agro Ecological Situation of Birbhum District.
9.	**Process of farmers participation and their reaction**	Farmers actively participated in the day to day monitoring of the fishery, animal, crop components and data collection with KVK scientists. Farmers also incurred all the labour cost for the Integrated Farming.

Thematic area: Integrated Farming System (Rainy, 2018)

Problem definition: Lower profitability under fish based production system

Technology assessed: Assessment of profitability due to integration of different components under fish based production systems

Table: Profitability under fish based integrated farming system

Technology option	No. of trials	Man days utilized per year	Cost of cultivation (Rs./unit*)	Gross return (Rs./unit)	Net Return (Rs /unit)	BC Ratio
Farmer's practice: Traditional fish farming	7	15	39,860.00	48,320.00	8,460.00	1.21
I. composite fish culture (IMC) + Duck farming (30 nos) + *Azolla* + Pulses (Redgram- Blackgram)		250	60,950.00	1,78,675.00	1,17,725.00	2.93
II. composite fish culture (IMC) + Duck farming (30 nos) + *Azolla* + Vegetables (ladys' finger-capsicum)		265	90,640.00	2,28,500.00	1,37,860.00	2.52
Sem±		9.23	-	-	-	0.107
CD at 5%		28.42	-	-	-	0.33

- FP: 1 unit = 0.19 ha pond only + fallow land
- Opt-1: 1 unit= 0.19 ha pond + 30 nos. of Ducks + 0.13 ha utilsed land with pulse
- Opt-2: 1 unit= 0.19 ha pond + 30 nos. ofDucks + 0.13 ha utilised land by vegetables

Result:

The result of the trial indicated that Technology Option –I i.e. Composite fish culture +Poultry farming +Azolla+ Pulses exhibited significantly higher BC ratio (2.93) than those of Technology Option-II (2.52) and farmers practice (1.21). Here it is to be mentioned that gross return and net return was higher in integrated farming system where vegetable cultivation was one of the component. It might be due to higher value of vegetables than pulses. But due to low cost of cultivation, BC ratio was higher in integrated farming system where pulses were the component. Droppings of ducks were also used as feed of fishes in both Technology Option-I and II. But in Technology Option-I, the leftover materials of pulses were also used as feed of fishes and ducks. So integration was more among the components in the Technology Option-I. Moreover, azolla was also used as feed of fish and ducks. Besides that, the azolla was also used as organic manure and bio fertilizer in pulses and vegetables. Further, man day's utilization (265 per year) was slightly higher in Technology Option –II than Technology Option-I (250 per year) but it was found at par effects. In farmers practice, man days utilization was very low (15 per year) and BC ratio was also very low (1.21).Therefore, it may be concluded that integrated farming system with composite fish culture, duck farming, azolla and pulse cultivation in bank of the pond is very effective to integrate the components in profitable manner in Birbhum District.

OFT – 4

Title of On farm Trial	Assessment of specific medicines for the control of ulcerative disease in fish
Problem diagnosed	Rapid spread of ulcerative disease due to absence of right selection of medicine for the disease
Details of technologies selected for assessment/refinement	**Assessment** **Farmers' Practice:** Irregular application of lime and not in required dose **Technology Option I: Lime (@10 kg / 0.13 ha) + Terramycin (@ 5 – 7 gm. / 100 kg. of Fish Feed)** **Technology Option II:Lime(@10 kg / 0.13 ha) + $KMnO_4$ (@ 200 gm. / 0.13 ha)** **Technology Option III: Lime (@10 kg / 0.13 ha) + $CuSO_4$ (@ 1:2000 ppm)** **Fish Feed:- Rice Bran + Mustard Oil Cake (1:1)**
Source of Technology (ICAR / AICRP / SAU / other, please specify)	Others [A Hatchery Manual for the Common Chinese and Indian Major Carps , V. G. Jhingran and R. S. V. Pullin, Asian Development Bank and International Centre for Living Aquatic Resources Management, 191p.]
Production system and thematic area	Extensive System and Thematic Area: - Disease Management
Performance of the Technology with performance indicators	The Programme is going on.
Final recommendation for micro level situation	
Constraints identified and feedback for research	
Process of farmers participation and their reaction	

Thematic area: Disease Management (Winter, 2018-19)

Problem definition: Rapid spread of ulcerative disease is mainly due to absence of right selection of medicine for management of the disease. Use of right medicine and curative measures for ulcer disease can save the fish production to a maximum extent

Technology assessed: Assessment of specific medicines for the control of ulcerative disease in fish.

The Programme is going on.

OFT - 5

1.	**Title of On farm Trial**	Assessment of insecticide efficiency to control thrips in summer green gram
2.	**Problem diagnosed**	Flower drop is a common phenomenon in summer pulse in Birbhum District. Spraying of 'B' is not effective in most of the cases. Proper insecticide is also not tested in the farmer's field. So, yield is low due to low flower set and pod formation
3.	**Details of technologies selected for assessment/refinement**	**Assessment** **Farmers' Practice –**Farmer's Practice - No insecticide application Technology Option-I - Thiomethoxam 25% WG 1gm/lit Technology Option-II- Thiomethoxam 25% WG (1gm/lit) + Lamda cyhalothrin 5% SC (0.5 ml/lit) Technology Option-III - Fipronil + Acetamiprid @ 1.6 ml/lit of water (800ml/ha)
4.	**Source of Technology (ICAR / AICRP / SAU / other, please specify)**	**ICAR** [Package of Practices for Pulse Cultivation, ICAR-IIPR, Kanpur, Uttar Pradesh, India.]
5.	**Production System** **Thematic Area**	Paddy – Mustard/ Potato – green gram Pest Management
6.	**Performance of the Technology with performance indicators**	The programme is going on.
7.	**Final recommendation for micro level situation**	
8.	**Constraints identified** **feedback for research**	
9.	**Process of farmers participation and their reaction**	

Thematic area: Pest Management (Summer, 2019)

Problem definition: Flower drop is a common phenomenon in summer pulse in Birbhum District. Spraying of 'B' is not effective in most of the cases. Proper insecticide is also not tested in the farmer's field. So, yield is low due to low flower set and pod formation.

Technology assessed: Assessment of insecticide efficiency to control thrips in summer green gram.

The Programme is going on.

OFT - 6

1.	**Title of On farm Trial**	Evaluation of performance of strategic feed supplementation to crossbreed milch cattle
2.	**Problem diagnosed**	Poor feeding practices and the low availability of quality feed in unorganized dairy farming by small and marginal farmer.
3.	**Details of technologies selected for assessment / refinement**	**Assessment** **Control:** Farmer's Practice **Technology Option - I:** Farmer's Practice + Protein Supplement (MOC 500gm/cow/day) **Technology Option - II:** Farmer's Practice + Homemade feed Supplement (1.5 Kg /cow/day)
4.	**Source of Technology (ICAR / AICRP / SAU / other, please specify)**	West Bengal University of Animal and Fishery Sciences (SAU)
5.	**Production system and thematic area**	Semi intensive system and Nutrition management.
6.	**Performance of the Technology with performance indicators**	The performance of technology Option – II i.e. Farmer's Practice + Homemade feed Supplement (1.5 Kg /cow/day) was found significant with 23.54 per cent increase in Milk yield (lit. / wk. / Cow), 12.84 % increase in Fat Percentage and increased B:C Ratio of 1.84 over the B:C Ratio of 1.50 of the Control i.e. Farmers' Practice.
7.	**Final recommendation for micro level situation**	The Technology Option – II i.e. Farmer's Practice + Homemade feed Supplement (1.5 Kg /cow/day) may be used for better production performance of Cross Breed Milch Cattle in Birbhum District.
8.	**Constraints identified and feedback for research**	The feed ingredients are considered highly expensive for small scale dairy farmers.
9.	**Process of farmers' participation and their reaction**	Farmers actively participated in the day to day monitoring and data collection with KVK scientists. Farmers incurred all the cost of medicine, vaccines and other infrastructure.

Thematic area: Nutrition management (2017-18)

Problem definition: Poor feeding practices and the low availability of quality feed in unorganized dairy farming by small and marginal farmer.

Technology assessed:

Control: Farmer's Practice

Technology Option - I: Farmer's Practice + Protein Supplement (MOC 500gm/cow/day)

Technology Option - II: Farmer's Practice + Homemade feed Supplement (1.5 Kg. /cow /day)

Table: Effect of Strategic feed supplementation in performance of cross breed milch cattle

Technology Option	No. of trials	Milk yield (lit. / wk. / Cow)	Fat %	SN Fat %	Cost of farming (Rs. / unit)	Gross return (Rs. / unit)	Net Return (Rs/unit)	B/C Ratio
Control: Farmer's Practice	7	50.26 ± 0.68	4.05 ± 0.05	8.52 ± 0.04	39200.00	98280.00	59080.00	1.50
Technology Option - I: Farmer's Practice + Protein Supplement (MOC 500 gm/cow/day)		58.38 ± 0.64	4.28 ± 0.04	8.65 ± 0.04	41720.00	113984.00	72264.00	1.73
Technology Option - II: Farmer's Practice + Homemade feed Supplement (1.5 Kg /cow/day)		62.09 ± 0.52	4.57 ± 0.04	8.71 ± 0.03	45950.00	130238.00	84288.00	1.84

Result: The performance of technology Option – II i.e. Farmer's Practice + Homemade feed Supplement (1.5 Kg /cow/day) was found significant with 23.54 per cent increase in Milk yield (lit. / wk. / Cow), 12.84 % increase in Fat Percentage and increased B:C Ratio of 1.84 over the B:C Ratio of 1.50 of the Control i.e. Farmers' Practice.

OFT - 7

1.	**Title of On farm Trial**	Assessment of the effect of different water sanitizer on the performance of Broiler chicken under small scale farming system
2.	**Problem diagnosed**	Poor drinking water quality of commercial broiler farm negatively affected performance
3.	**Details of technologies selected for assessment / refinement**	**Assessment** **Control:** Farmers' Practice **Technology Option – I:** Didecyl dimethyl ammonium chloride (1 ml. / 20 litres of water) **Technology Option – II:** Chlorine dioxide (1 ml/litre of water) **Technology Option – III:** Iodine (1 ml/ 10 litres of water)
4.	**Source of Technology (ICAR / AICRP / SAU / other, please specify)**	ICAR-CARI, Ijatnagar.
5.	**Production system and thematic area**	Deep litter farming system; Broiler Management
6.	**Performance of the Technology with performance indicators**	Performance of the technology of water sanitizer in broiler chicken was found significant
7.	**Final recommendation for micro level situation**	Technology option II i.e. Chlorine di oxide may be used for better performance in broiler chicken in the district.
8.	**Constraints identified and feedback for research**	Farmers are reluctant to use acidifier Biochemical and hematological observations may be recorded when probiotic will be used with feed for broiler farming
9.	**Process of farmers' participation and their reaction**	Farmers actively participated in the day to day monitoring and data collection with KVK scientists. Farmers incurred all the cost of feed and other infrastructure

Thematic area: Broiler management (Pre kharif season, 2018-19)

Problem definition: Poor drinking water quality of commercial broiler farm negatively affects the performance

Technology assessed: Assessment of the effect of different water sanitizer on the performance of Broiler chicken under small scale farming system

Table: Effect of different water sanitizer in the performance of broiler chicken

Technology Option	No. of trials	Body Weight gain	FCR	Mortality	Cost of farming(Rs/unit) i.e. 2400 nos.	Gross return (Rs/unit) i.e. 2400 nos	Net Return (Rs/unit) i.e. 2400 nos	B/C Ratio
		42nd day	42nd day	42nd day				
Control Farmer's practice	7	2165.08±44.23	1.75±0.045	43.61±4.98	3,12,488.30	3,86,582.40	74094.10	1.24
I. Didecyl dimethyl ammonium chloride		2285.45±42.37	1.63±0.037	25.74±4.25	3,08,488.51	4,20,810.70	112322.19	1.36
II. Chlorine di oxide		2311.78±38.86	1.59±0.035	21.58±3.85	3,04,424.38	4,27,627.20	123202.82	1.40
III. Iodine		2238.32 ±41.78	1.65±0.041	31.53±3.54	3,06,440.74	4,07,859.20	101418.46	1.33

Result: The data from this table indicated that Technology option II i.e. Chlorine di oxide produced better B/C ratio than other technology options and farmer's practice.

OFT - 8

1.	**Title of On farm Trial**	Evaluation of efficacy of non antibiotic growth promoter in broiler poultry
2.	**Problem diagnosed**	Potential of antibiotic resistant strains of bacteria of bacteria and transference of antibiotic resistance genes from animal to human.
3.	**Details of technologies selected for assessment / refinement**	**Assessment** **Control:** Farmer's practice **Technology Option – I:** Lactobacillus + Saccharomyces (500gm / ton of feed) **Technology Option – II:** Xylanase + Phytase + Amylase + Protease enzyme (250 gm/ton of feed)

		Technology Option – III: Probiotic [Lactobacillus + Saccharomyces + Multiple enzyme [Xylanase + Phytase + Amylase + Protease enzyme] (500 gm/ton of feed)
4.	**Source of Technology (ICAR / AICRP / SAU / other, please specify)**	Deptt. of Animal Nutrition, WBUAFS (SAU)
5.	**Production system and thematic area**	Deep litter system and Broiler management
6.	**Performance of the Technology with performance indicators**	Performance of the **Technology Option – I:** Lactobacillus + Saccharomyces (500gm / ton of feed) was found significant
7.	**Final recommendation for micro level situation**	**Technology Option – I:** Lactobacillus + Saccharomyces (500gm / ton of feed) may be used for better performance in broiler chicken in the district.
8.	**Constraints identified and feedback for research**	The feed additives are not easily available in local market. Biochemical and hematological observations may be recorded when probiotic will be used with feed for broiler farming.
9.	**Process of farmers' participation and their reaction**	Farmers actively participated in the day to day monitoring and data collection with KVK scientists. Farmers incurred all the cost of feed and other infrastructure.

Thematic area: Broiler management (2017-18)

Problem definition: Emergence of antibiotic resistant strains of bacteria and transfer of antibiotic resistance genes from animal to human

Technology assessed: Evaluation of efficacy of non antibiotic growth promoter in broiler poultry.

Table: Performance of different non antibiotic growth promoter

Technology Option	**No. of trials**	**Body Weight gain**		**FCR**		**Mortality**		**Cost of farming(Rs/unit) i.e. 2400 nos.**	**Gross return (Rs/unit) i.e. 2400 nos**	**Net Return (Rs/unit) i.e. 2400 nos**	**B/C Ratio**
		21st day	**42nd day**	**21st day**	**42nd day**	**21st day**	**42nd day**				

Control: Farmer's practice	7	708.58±25.63	2189.37±46.91	1.45±0.038	1.75±0.043	21.45±3.12	27.57±4.23	3,19,579	4,01,208	81,629	1.25
I. Probiotic [Lactobacillus + Saccharomyces (500gm / ton of feed)]		772.51±31.27	2337.23±39.64	1.31±0.032	1.60±0.041	17.85±2.98	21.52±3.68	3,13,023	4,31,702	1,18,679	1.38
II. Multiple Enzyme [Xylanase + Phytase + Amylase + Protease enzyme (250 gm/ton of feed)]		741.69±23.54	2258.01±37.4	1.38±0.037	1.65±0.039	19.59±2.83	25.78±3.24	3,12,116	4,14,000	1,01,884	1.32
III. Probiotic + Multiple enzyme		756.53±28.61	2285.74±33.58	1.34±0.035	1.63±0.043	15.73±2.88	20.47±2.97	3,13,975	4,23,168	1,09,193	1.34

Result: The data from this table indicated that Technology option I i.e. probiotic produced better B/C ratio than other technology options and farmer's practice.

OFT – 9

1.	**Title of On farm Trial**	Evaluation of efficacy of different Training Methods for Skill Development Trainings
2.	**Problem diagnosed**	The selection of appropriate Training Methods is important for an effective learning. The Training Methods refer to a combination of various instructional media used for conducting the Training to achieve the learning objective efficiently and effectively. The selection of suitable Training Methods is largely influenced by the Training Objectives, Subject Matter handled, participants' nature, resources availability such as Time, Location and Budget, Organizational considerations and Trainers' capability. The choice of the Training Method will also depend upon whether the Training is intended to develop a general or specific level of knowledge and skill. The participants learning style, their experience and size of the group are also some of the factors that are to be kept in mind while deciding upon the Training Methods.

3.	**Details of technologies selected for assessment / refinement**	**Assessment** **Prevalent Practice: Lecture Methods** **Technology Option – I: Group Discussion** **Technology Option – II: Case Study** **Technology Option – III: Field Visits** **Technology Option – IV: Demonstration** **Technology Option – V: Experiential Learning**
4.	**Source of Technology (ICAR / AICRP / SAU / other, please specify)**	**ICAR [**Concepts, Approaches and Methodologies for Technology Application and Transfer – A Resource Book for KVKs, Zonal Project Directorate, Zone – III, Indian Council of Agricultural Research, Umiam, pp. 103 – 152.]
5.	**Production system and thematic area**	Mainly Lecture Methods of Training Thematic Area: - Training Methods
6.	**Performance of the Technology with performance indicators**	Technology Option – V i.e. the Experiential Learning Training Method holds the First Rank in all the Performance Indicator Parameters as well as in the overall performance for assessing the efficacy of the different Training methods distantly followed by Technology Option – IV: Demonstration Method and Technology Option – III: Field Visit Method in Second and Third positions respectively.
7.	**Final recommendation for micro level situation**	When formulating Training Modules, the Methodology Training should be Experiential Learning Training Method so that the Trainees can have an exposure to the real life hands-on experience related to information, knowledge and skill of the concerned Training Course.
8.	**Constraints identified and feedback for research**	Though the Experiential Learning Training method is by far the best methodology of Training, its formulation is complicated, time consuming and needs expert's minute attention. Future research should focus in the simplification of the formulation and implementation process of the Experiential Learning Training method.
9.	**Process of farmers' participation and their reaction**	The farmers i.e. the Trainees enthusiastically underwent all the six types of Training Methods and they expressed that they have had a more active participation and more clarity of the Training Topic when that training has been given to them using the Experiential Learning Training method.

Thematic area: *Training Methodology* (2017-18)

Problem definition: The selection of appropriate Training Methods is important for an effective learning. The Training Methods refer to a combination of various instructional media used for conducting the Training to achieve the learning objective efficiently and effectively.

The selection of suitable Training Methods is largely influenced by the Training Objectives, Subject Matter handled, participants' nature, resources availability such as Time, Location and Budget, Organizational considerations and Trainers' capability.

The choice of the Training Method will also depend upon whether the Training is intended to develop a general or specific level of knowledge and skill. The participants learning style, their experience and size of the group are also some of the factors that are to be kept in mind while deciding upon the Training Methods.

Technology assessed: Evaluation of efficacy of different Training Methods for Skill Development Trainings viz. Prevalent Practice: Lecture Methods; Technology Option – I: Group Discussion; Technology Option – II: Case Study; Technology Option – III: Field Visits; Technology Option – IV: Demonstration and Technology Option – V: Experiential Learning

Table: Comparative Performance of Different Skill Development Training Methods

Training Methods	Nos. of Selected Trainees	Level of participation (According to the Trainees' Perception) (Participation Index)	Level of understanding (According to the Trainees' Perception) (Understanding Index)	Level of knowledge gain (According to the Trainees' Perception) (Knowledge Index)	Degree of decision making skill (Tested through Viva-Voce Examination of the Trainees) (Percentage of Marks)	Degree of application skill (Tested through Practical Examination of the Trainees) (Percentage of Marks)	Degree of problem solving skill [Tested through Practical Examination (100 Marks) + Theoretical Examination (100 Marks) of the Trainees] (Percentage of Marks)	Degree of proper concluding skill (Tested through Theoretical Examination of 100 Marks) (Percentage of Marks)	Total Score on 700 Point Scale	Rank
Prevalent Practice: Lecture Methods	10	5.81	4.42	3.32	31.00	28.00	21.00	22.00	237.50	V
Technology Option – I: Group Discussion	10	6.42	5.62	4.72	42.00	41.00	29.00	27.00	306.60	IV
Technology Option – II: Case Study	10	4.01	4.02	3.11	41.00	21.00	12.00	41.00	226.40	VI
Technology Option – III: Field Visits	10	4.31	7.01	7.10	71.00	45.00	57.00	61.00	418.20	III
Technology Option – IV: Demonstration	10	8.19	8.70	8.79	81.00	71.00	72.00	64.00	544.80	II
Technology Option – V:	10	9.13	9.90	9.11	94.00	92.00	91.00	81.00	639.40	I

Experiential Learning										

Result: Technology Option – V i.e. the Experiential Learning Training Method holds the First Rank in all the Performance Indicator Parameters as well as in the overall performance for assessing the efficacy of the different Training methods distantly followed by Technology Option – IV: Demonstration Method and Technology Option – III: Field Visit Method.

OFT - 10

1.	**Title of On farm Trial**	**Assessing performance of different group sizes of SHG on annual savings**
2.	**Problem diagnosed**	The selection of appropriate group size of Self Help Groups (SHGs) is important for efficient group dynamics as well as group performances. The selection of a suitable size of group members of a SHG is largely influenced by various socio-economic and situational factors which in turn affect the economic performances such as annual savings from the group activities.
3.	**Details of technologies selected for assessment / refinement**	**Assessment** **Farmers' Option = T_1 =** 10 members (Small Group) **T_2=** 11-15 members (Medium group) **T_3=** >15 members (Large Group)
4.	**Source of Technology (ICAR / AICRP / SAU / other, please specify)**	**ICAR (Overview of Frontline Extension Tools and Designing OFTs in Extension, R. Roy Burman, ICAR-IARI, New Delhi).**
5.	**Production system and thematic area**	Group Formation System: - Generally 10 – 20 numbers of persons of a locality or nearby localities can form a Self Help Group. Thematic Area: - Group Dynamics.
6.	**Performance of the Technology with performance indicators**	The Programme is going on.
7.	**Final recommendation for micro level situation**	
8.	**Constraints identified and feedback for research**	
9.	**Process of farmers' participation and their reaction**	

Thematic area: Group Dynamics (2018-19)

Problem definition: The selection of appropriate group size of Self Help Groups (SHGs) is important for efficient group dynamics as well as group performances. The selection of a suitable size of group members of a SHG is largely influenced by various socio-economic and situational factors which in turn affect the economic performances such as annual savings from the group activities.

Technology assessed:

Assessing performance of different group sizes of SHG on annual savings viz. Farmers' Option = T_1 = 10 members (Small Group); **T_2=** 11-15 members (Medium group) and **T_3=** >15 members (Large Group).

The Programme is going on.

3.2 Achievements of Frontline Demonstrations

A. Details of FLDs conducted during the year

Cereals

Sl. No.	Crop	Thematic area	Technology Demonstrated with detailed treatments	Area (ha)		No. of farmers/ demonstration								Reasons for shortfall in achievement
				Proposed	Actual	SC		ST		Others		Total		
						M	F	M	F	M	F	M	F	
1.	Wheat (Rabi-2018-19)	Varietal replacement	Improved variety HD 2967	-	3.0	04	00	02	00	08	00	14	00	

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil (Kg/ha)			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P_2O_5	K_2O					
1. Wheat	**Rabi, 2018 -19**	**Irrigated medium land**	**Sandy loam**	**M**	**L**	**M**	**Short duration paddy**	**1st December - 15th December, 2018**	**5th. April – 20th. April, 2019**	**58**	**14**

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check (Var. Sonalika)		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Wheat	Vareital replacement	Improved Variety	14	3.0	40.5	30.2	31.00	23500.00	64800.00	41300.00	2.76	22400.00	48320.00	25920.00	2.16
	Total		14	3.0	40.5	30.2	31.00	23500.00	64800.00	41300.00	2.76	22400.00	48320.00	25920.00	2.16

Performance of FLD

Oilseeds:

Frontline demonstrations on oilseed crops

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Kharif Sesame	Crop diversification	Var. SWB- 32-10-1 + + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	145	20	10.10	7.20	40.2	14200	48480	34280	3.41	13400	34560	21160	2.5
Rabi Mustard	Crop diversification	Var. NC-1 + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	91	20	11.90	10.25	16	20982	59500	38518	2.84	19983	51250	31267	2.56
Rabi Linseed	Crop diversification	Var. Sekhar + Herbicides pendimethalin as pre-emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	98	15	8.50	4.50	89	15851	59500	43649	3.75	14665	31500	16835	2.14
Total			**334**	**55**											

* Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

Pulses

Frontline demonstration on pulse crops

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Kharif Black gram	Crop diversification	Var. WBU-109 + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrientspray Boron-20 @ 2g/lt water in 25 and 45 DAS	129	20	11.25	5.9	91	16800	61875	45075	3.68	15750	32450	16700	2.06
Rabi, Chick pea	Crop diversification	Improved Var. Anuradha + Herbicide Whip Super (Fenoxaprop-P-ethyl) as early post emergence @ 0.5 lt /ha + Micronutrient spray Boron-20 @ 2 g/lt water in 25 and 45 DAS and need based fungicide spray Carbendazim+ Mancozeb 2 g/lt of water for control of wilt	74	20	14.95	8.15	83.4	17800	74750	56950	4.20	16758	40750	23992	2.43

Lentil	Crop diversification	Improved variety WBL 77 + Herbicide Whip Super (Fenoxaprop-P-ethyl) as early post emergence @ 0.5 lt /ha + Micronutrient spray Boron-20 @ 2 g/lt water in 25 and 45 DAS and need based fungicide spray Carbendazim+ Mancozeb 2 g/lt of water for control of wilt	119	20	13.50	7.40	82.4	18810	81000	62190	4.30	16848	44400	27552	2.63
Field Pea	Crop diversification	Improved variety Rachna + Herbicide Whip Super (Fenoxaprop-P-ethyl) as early post emergence @ 0.5 lt /ha + Micronutrient spray Boron-20 @ 2 g/lt water in 25 and 45 DAS and need based fungicide spray Carbendazim+ Mancozeb 2 g/lt of water for control of wilt	105	20	12.50	4.10	204	13915	56250	42335	4.0	12100	18450	6350	1.52
	Total		**427**	**80**											

* Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

Other crops

Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	Area (ha)	Yield (q/ha)		% change in yield	Other parameters			*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demonstration	Check			Demo	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
1. Azolla kharif, 2018	Soil Health Management	Green Manuring in rainy season paddy var. MTU-7029	35	10.0	63.0 (Paddy yield)	51.9 (Paddy yield)	21.4	No. of panicles/ m^2	384	361	59450	88200	28750	1.50	60932	72660	11728	1.19
								No. of grains/ panicle	167	140								
2. Ekangi Pre kharif, 2018	Crop diversification	Planting Materials and Method of Cultivation	20	00.26	137	New Introduction	-	Yield	137.00 q / ha	-	1,80,000	10,96,000	9,16,000	6.08	-	-	-	-
3 Paddy, Kharif, 2018	Herbicide application	Metsulfuron-methyl +chlorimuron-ethyl @ 4 g a.i /ha at 7-12 DAT	60	20	63.9	57.2	11.7	Weed population at 60 DAT	9.8	11	58620	89460	30840	1.53	64540	80000	15460	1.23
3. Drumstick Kharif, 2018	Varietal replacement	PKM-1	60		Crop is now in growing stage.													

4. Elephant Foot Yam Kharif, 2018	Varietal replacement	Bidhan Kusum	20	0.14	694.5	200 (Local)	247	Corm size	29.5	10.2	527000	1389000	862000	2.64	230000	400000	170000	1.74
Green Fodder, Sorghum , Pre kharif 2018	Varietal replacement	PC-23	28	1.00	785.50	398.3 (Goma)	97.21	CP%	9.20	6.65	18250	47130	28880	2.58	15975	23748	7773	1.48
Green Fodder, Maize Pre Kharif, 2018	Varietal replacement	J-1006	28	1.00	392.25	292.5 (Local improved)	34.1	CP%	8.82	7.95	15538	23535	7997	1.51	14950	17550	2600	1.17
Green Fodder, Rice bean Pre Kharif, 2018	New introduction	Bidhan-2	28	1.00	350.5	-	-	CP%	27.1	-	20510	56080	35570	2.73	-	-	-	-
Green Fodder, Oat Rabi, 2018-19	New Introduction	Kent	08	0.63	308.8	73.7 (Local grass in grazing land)	319.0	CP (%)	9.12	2.56	10750	15440	4690	1.44	_	_	_	-
Food+Fodder intercropping, Rabi, 2018-19	New Introuctiond	Fodder (Oat) + Pulse (Lentil) intercropping	15	2.0	Oat-230 Lentil-7.6	-	-				17100	57100	40000	3.34	-	-	-	-

Livestock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
					Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Dairy																	
Cow																	
Buffalo																	

Poultry (Chicken, 2018 – 2019)	Feed management	Supplementation with Non-antibiotic (Probiotic) growth promoters in broiler production	30	30 (25 birds per unit)	Body Weight (gm.) at 42nd. Day: 2315.78 ± 41.23	Body Weight (gm.) at 42nd. Day: 2258.65 ± 44.39	02.53	Mortality 66.61 ± 1.48	Mortality 102.32 ± 1.65	311816	433190	121374	1.39	319208	415478	96270	1.30
Rabbitry																	
Piggery																	
Sheep and Goat [Goat (2017-18)]	Feed Management	Supplementation of low cost concentrate to does at 3rd parity	10	10 (2 per unit)	Litter size-2.4± 0.17	Litter size-1.9±0.49	26.3	Birth weight-1.38±0.05	1.07±0.04	20380	63551	43171	3.11	17730	49551	31821	2.79
Sheep and Goat [Goat 2018-19]	Feed management	Calcium supplementation in Black Bengal Does after kidding	10	10 (2 Does per unit)													
Duckery 2017 -18	Breed replacement	Improved Breed White Pekin	30	30	Average Body Weight at 4thWk: Male: 857.28±12.88 Female: 685.89 ±10.35 Average Body Weight at 8thWk: Male: 1851.42±22.65 Female: 1614.38± 10.35	-	-	-	-	3073	5196	2123	1.69	-	-	-	-
Others (pls. specify)																	
Total			70	70													

* Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.

**** BCR= GROSS RETURN/GROSS COST**

Fisheries

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
					Demons Ration	Check		Demons Ration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Common carps (2017-18)	Feed management	Use of dry yeast and cobalt chloride in fish feed	10	10	Yield: 10.95 q/ha at 6 month	Yield: 4.99 q/ha at 6 month	119	Survival rate at 20 days 88.8 %	Survival rate at 20 days 47.9%	57670.00	114975.00	57305.00	2.00	47200.00	49900.00	2700.00	1.05
Common carps (2018-19)	Feed management	Use of dry yeast and cobalt chloride in fish feed	10	10	Programme is in progress												
Mussels																	
Ornamental fishes																	
Others (pl. specify) Introduction of Vetki in composite fish culture 2017-18	Crop diversification	Cultivation of vetki with composite fish culture	09	09	Tield: Bhetki-338 kg/ha + IMC & exotic carp-1875 kg /ha	IMC & exotic carp: 2250 kg /ha	-	Av. Weight of Bhetki: 1.8 kg	Av. Weight of IMC: 1.3 kg	126100	356250	230150	2.82	115500	225000	109500	1.94
Others (pl.specify) Introduction of Vetki in composite fish culture 2018-19	Crop diversification	Cultivation of vetki with composite fish culture	10	10	Programme is going on												
		Total	20	20													

* Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

Other enterprises

Category	Name of the technology demonstrated	No. of Farmer	No.of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.) or Rs./unit				*Economics of check (Rs.) or Rs./unit			
				Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Oyster mushroom	Enterprise development															
Button mushroom																
Vermicompost																
Sericulture																
Apiculture																
Others (pl.specify) Participatory video making	Participatory video making on establishment and management of seed production units of cereals and pulses	100	10	The Programme is going on.												
Total		100	10													

* Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

Women empowerment

Category	Name of technology	No. of demonstrations	Observations		Remarks
			Demonstration	Check	
Farm Women	Back Yard Kitchen Garden	30	The Programme is going on.		
Pregnant women					
Adolescent Girl					
Other women					
Children					
Neonatal					
Infants					

Farm implements and machinery

Name of the implement	Crop	Name of the technology demonstrated	No. of Farmer	Area (ha)	Filed observation (output/man hour)		% change in major parameter	Labor reduction (man days / ha)		Cost reduction (Rs./ha or Rs./Unit)	
					Demons Ration	Check		Demonstration	Check	Demonstration	Check
Drum Seeder	Summer paddy var. IET 4786	Direct Seeding of Rice in Lines	6	6.5				60		12,000.00	

*** Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.**
**** BCR= GROSS RETURN/GROSS COST**

Demonstration details on crop hybrids

Crop	Name of the Hybrid	No. of farmers	Area (ha)	Yield (kg/ha) / major parameter			Economics (Rs./ha)			
Cereals				**Demo**	**Local check**	**% change**	**Gross Cost**	**Gross Return**	**Net Return**	**BCR**
Bajra										
Maize										
Paddy										
Sorghum										
Wheat										
Others (Pl. specify)										
Total										
Oilseeds										
Castor										
Mustard										
Safflower										

Sesame										
Sunflower										
Groundnut										
Soybean										
Others (Pl. specify)										
Total										
Pulses										
Greengram										
Blackgram										
Bengalgram										
Redgram										
Others (Pl. specify)										
Total										
Vegetable crops										
Bottle gourd										
Capsicum										
Cucumber										
Tomato										
Brinjal										
Okra										
Onion										
Potato										
Field bean										
Others (Pl. specify)										
Total										
Commercial crops										
Cotton										
Coconut										
Others (Pl. specify)										
Total										
Fodder crops										

Napier (Fodder)										
Maize (Fodder)										
Sorghum (Fodder)										
Others (Pl. specify)										
Total										

Technical Feedback on the demonstrated technologies

Sl. No.	Crop	Feed Back
1.	Wheat Vars. HD 2967 (2018 – 19)	The Wheat Variety HD - 2967 with an average yield of 40.5 q / ha may be cultivated instead of Sonalika. The percentage yield of the Var. HD - 2967 increased over 31.00 percent over the local check Sonalika.The seed rate should be less in HD 2733 as its growth habit is more spreading.
2.	*Azolla* (2018 – 19)	After multiplication of *Azolla* and incorporation in Paddy field before transplanting, application of Nitrogenous fertilizers was reduced up to 21.4 per cent for the next Paddy cultivation in the same field.
3.	Crop Diversification through introduction of Ekangi (a Medicinal Plant) (2018 – 19)	Ekangi (*K. galanga*) was introduced in mono cropped up and medium land situation replacing Kharif Paddy as crop diversification gave an increased yield of 137 q. / ha which fetched a higher B: C ratio of 6.08.
4.	Herbicide i.e. Metsulfuron-methyl +chlorimuron-ethyl Application in Kharif Paddy @ 4 g a.i /ha at 7-12 DAT (2018 – 19)	Herbicide i.e. Metsulfuron-methyl +chlorimuron- ethyl Application in Kharif Paddy @ 4 g a.i /ha at 7-12 DAT gives a yield of 63.9 q / ha in comparison to the yield of 57.2 q / ha without any Herbicide application and this increases the yield upto 11.7 and also the Herbicide application increased the B: C Ratio to 1.53 from 1.23 without herbicide application.
5.	Drumstick Var. PKM – 1 (2018 – 19)	The *Baramasia* Drumstick Var. – PKM -1 is in satisfactory growing stage.
6.	Varietal Replacement of Elephant Foot Yam with Var. Bidhan Kusum (2018 – 19)	The Elephant Foot Yam was cultivated in up-land mono cropped area in rainfed condition as crop diversification satisfactorily with an average yield of 694.5 q. / ha with 247.00 per cent increase in yield over local check along with B : C Ratio of 2.64 over 1.74 in Local Check.
7.	Fodder Sorghum Var. PC – 23 (2018 – 19)	Very luxuriant green fodder was produced with an increased Yield of 97.21 per cent over the local Check Goma, with CP Percentage of 9.20 over 6.65 of the local check and with an increased B:C Ratio of 2.58 over the local Chech B:C Ratio of 1.48.
8.	Fodder Maize Var. J – 1006 (2018 – 19)	Very luxuriant green fodder was produced with an increased Yield of 34.10 per cent over the local Check Local Improved, with CP Percentage of 8.82 over 7.95 of the local check and with an increased B:C Ratio of 1.51 over the local Chech B:C Ratio of 1.17.
9.	Fodder Rice Bean Var. Bidhan – 2 (2018 – 19)	Rice Bean Var. Bidhan – 2 is a very luxuriant green fodder was produced with a CP Percentage of 27.1.
10.	Fodder Oat Var. Kent (2018 – 19)	Very luxuriant green fodder was produced with an increased Yield of 319.0 q. / ha, with CP Percentage of 9.12 over 2.56 of the local check i.e. grazing land grass with an increased B:C Ratio of 1.44.
11.	Fodder (Oat) + Pulse (Lentil) intercropping (2018 – 19)	Fodder (Oat) + Pulse (Lentil) intercropping gives a B: C Ratio of 3.34 with a Net Return of Rs. 40,000.00 / ha.
12.	Supplementation with Non-antibiotic (Probiotic) growth promoters in broiler	Supplementation with Non-antibiotic (Probiotic) growth promoters in broiler production is very much profitable in terms of Body Weight gain at 42nd. Day i.e. 2315.78 $\pm$ 41.23 Grams in comparison to the Body Weight gain of 2258.65 $\pm$ 44.39 Grams coming from traditional practice and this gives rise to a B: C Ratio of 1.39 in comparison to 1.30 of traditional practice.

	production (2018 – 19)	
13.	Supplementation of low cost concentrate to does at 3rd parity (2017-18)	Supplementation of low cost concentrate to does at 3rd parity is significantly profitable in terms of litter size which is 2.4 ± 0.17 Numbers in comparison to the Litter Size of 1.9 ± 0.49 in traditional feeding practice and the supplementation with Low Cost Concentrate to Does gives a B;C ratio of 3.11 in comparison to 2.79 coming from traditional feeding practice.
14.	Calcium supplementation in Black Bengal Does after kidding (2018 – 19)	The Programme is going on.
15.	Introduction of Improved Duck Breed White Pekin (2018-19)	Introduction of Improved Duck Breed White Pekin shows average Body Weight gain at 4th. Week in males 857.28 ± 12.88 Grams and in Females 685.89 ± 10.35 Grams and Average Body Weight Gain at 8th. Week in Male is 1851.42 ± 22.65 Grams and in Females is 1614.38 ± 10.35 Grams with B: C Ratio of 1.69.
16.	Use of dry yeast and cobalt chloride in fish feed in Common Carp (2017-18)	Use of dry yeast and cobalt chloride in fish feed in Common Carp gives a Yield of 10.95 q / ha at 6 Months in comparison to traditional Feed Yield of 4.99 q / ha at the same time the Use of Yeast and Cobalt Chloride increases 119 % with increased B: C Ratio of 2.00 in comparison to B: C Ratio of 1.05 from traditional feed.
17.	Use of dry yeast and cobalt chloride in fish feed in Common Carp (2018-19)	The Programme is going on.
18.	Cultivation of Bhetki with composite fish culture (2017 – 18)	Introduction of Bhetki cultivation as a component of Composite Fish culture with IMC and Exotic Carps was remunerative with Bhetki yield of 338 kg. / ha. Along with IMC and Exotic Carps Yield of 1875 kg. / ha and it gives an increased B: C Ratio of 2.82 in comparison to Check (Composite Fish Culture with only IMC and Exotic Carps) of 1.94.
19.	Cultivation of Bhetki with composite fish culture (2018 – 19)	The Programme is going on.
20.	Participatory video making on establishment and management of seed production units of cereals and pulses (2018 – 19)	The Programme is going on.
21.	Back Yard Kitchen Garden (2018 – 19)	The Programme is going on.
22.	Use of Drum Seeder for direct seeding of rice in lines (2018 – 19)	It is essential and cost effective as it reduces the labour requirement. The Cost reduction by using Drum Seeder is Rs. 12,000.00 per hectare with an average cost reduction of 60 per cent.But found difficult in rainy season if heavy rain comes within 3 days of sowing

Extension and Training activities under FLD

Sl. No.	Activity	Date	No. of activities organized	Number of participants	Remarks
1.	Field days	05.04.2018; 15.05.2018; 29.05.2018; 16.07.2018; 12.08.2018; 31.08.2017; 01.09.2018; 14.09.2018; 16.09.2018; 18.10.2018; 28.10.2018; 13.11.2018; 15.11.2018; 10.12.2018; 25.01.2019; 20.02.2019 and 16.03.2019.	17	646	Field Days were organized on different Improved Agro-Technologies on which Fron Line Demonstration were organized by the Rathindra KVK

2.	Farmers Training	03.04.2018; 11.06.2018 to 12.06.2018 and 15.06.2018 and 17.06.2018; 18.06.2018 to 19.06.2018 and 22.06.2018 to 23.06.2018;24.06.2018 to 26.06.2018 and 29.06.2018; 19.07.2018 to 22.07.2018; 07.08.2018; 13.08.2018; 14.08.2018; 19.08.2019; 07.09.2018; 08.09.2018; 26.11.2018; 27.11.2018; 28.11.2018; 01.12.2018; 03.12.2018; 07.12.2018; 08.12.2018; 09.12.2018; 10.12.2018; 22.12.2018; 02.03.2019 to 05.03.2019; 08.03.2019; 01.07.2018 to 03.07.2018; 08.07.2018 to 10.07.2018; 03.08.2018 to 05.08.2018; 26.05.2018 to 29.05.2018; 06.10.2018 to 08.10.2018; 26.11.2018; 27.11.2018; 17.12.2018 to 18.12.2018; 01.07.2018 to 02.07.2018; 03.08.2018 to 04.08.2018 and 05.10.2018 to 07.10.2018.	36	1046	Knowledge and Skill Development Training Programmes were organized on different Improved Agro-Technologies on which Fron Line Demonstration were organized by the Rathindra KVK.
3.	Media coverage	18.08.2018.; 29.09.2018; 24.11.2018 and 19.01.2019.	04	Not Assessed	Two Live Phone-In Programmrs and Two Recorded Programmes were broadcasted by the All India Radio, Santiniketan Station on the Technologies demonstrated through FLD by the Rathindra KVK.
4.	Training for extension functionaries	08.05.2018; 26.06.2018; 26.06.2018; 14.08.2018 and 25.09.2018	05	185	In-service Refresher Training Programmes were organized Field Days were organized on different Improved Agro-Technologies on which Fron Line Demonstration were organized by the Rathindra KVK

Performance of the demonstration under CFLD on Pulse and Oilseed Crops during Kharif 2018 and Rabi 2018-19:

A. Technical Parameters:

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Kharif Pulse, Black gram	Kali-50	5.9	32	86	810	Crop: - Kharif Black Gram Var. WBU-109 + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrientspray Boron-20 @ 2g/lt water in 25 and 45 DAS	129	20	13.00	9.2	11.25	1671	622	66
1	Rabi Pulse, Chick Pea	Mahamaya-1	8.15	152	258	1185	Improved Var. Anuradha + Herbicide Whip Super (Fenoxaprop-P-ethyl) as early post emergence @ 0.5 lt /ha + Micronutrient spray Boron-20 @ 2 g/lt water in 25 and 45 DAS and need based fungicide spray Carbendazim+ Mancozeb 2 g/lt of water for control of wilt	74	20	16.20	11.80	14.95	447	263	74
2	Rabi Pulse, Lentil	Asha	7.40	90	190	860	Improved variety WBL 77 + Herbicide Whip Super (Fenoxaprop-P-ethyl) as early post emergence @ 0.5 lt /ha + Micronutrient spray Boron-20 @ 2 g/lt water in 25 and 45 DAS and need based fungicide spray Carbendazim+ Mancozeb 2 g/lt of water for control of wilt	119	20	14.80	10.20	13.50	677	321	70
3	Rabi Pulse, Field Pea	Local	4.10	40	667	1190	Improved variety Rachna + Herbicide Whip Super (Fenoxaprop-P-ethyl) as early post emergence @ 0.5 lt /ha + Micronutrient spray Boron-20 @ 2 g/lt water in 25 and 45 DAS and need based fungicide spray Carbendazim+ Mancozeb 2 g/ltof water for control of wilt	105	20	14.80	9.60	12.50	2000	119	67
4	Summer Pulse, Green Gram	Panna	-	-	-	-	Variety IPM-0203 + Herbicides + Micr-Nutrient Spray	119	20	Crop is now in haresting and threshing Stage.					

	(Summer – 2018-19)														
1	Kharif Oilseed, Sesame	Tilottoma	7.20	213	195	480	Var. SWB- 32-10-1 + + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	145	20	11.00	8.25	10.10	136	149	60
1	Rabi Oilseeds, Mustard	B-9	10.25	116	52	575	Var. NC-1 + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	91	20	13.25	10.80	11.90	142	317	28
2	Rabi Oilseeds, Linseed	Local Improved	4.50	155	55	750	Var. Sekhar + Herbicides pendimethalin as pre-emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	98	15	10.75	4.90	8.50	258	727	53

B. Economic parameters

Sl. No.	Variety demonstrated & Technology demonstrated	Farmer's Existing plot				Demonstration plot			
		Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C ratio	Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C ratio
1	Crop:- Kharif Black Gram Var. WBU- 109 + Herbicides pendimethalin as pre emergence @ 3lt/ha+Micronutrient spray Boron-20 @ 2g/lt water in 25 and 45 DAS	15750	32450	16700	2.06	16800	61875	45075	3.68
1	Crop: Rabi pulse Chick pea, Improved Var. Anuradha + Herbicide + Micronutrient spray and need based fungicide	16758	40750	23992	2.43	17800	74750	56950	4.20
2	Crop: Rabi pulse Lentil, ImprovedVar. WBL 77 + Herbicide + Micronutrient spray and need based fungicide	16848	44400	27552	2.63	18810	81000	62190	4.30
3	Crop: Rabi pulse Field pea, Var. Rachna + Herbicide + Micronutrient spray and need based fungicide	12100	18450	6350	1.52	13915	56250	42335	4.0
1	Crop: Kharif Oilseed Sesame, Var. SWB- 32-10-1	13400	34560	21160	2.5	14200	48480	34280	3.41

	+ + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS								
1	Crop: Rabi Oilseeds Mustard, NC-1 (Improved variety) + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	19983	51250	31267	2.56	20982	59500	38518	2.84
2	Linseed, Sekhar (Improved variety) + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	14665	31500	16835	2.14	15851	59500	43649	3.75

C. Socio-economic impact parameters

Sl. No.	Crop and variety Demonstrated	Total Produce Obtained (kg)	Produce sold (Kg/household)	Selling Rate (Rs/Kg)	Produce used for own sowing (Kg)	Produce distributed to other farmers (Kg)	Purpose for which income gained was utilized	Employment Generated (Mandays/household)
1.	Black Gram Var. WBU- 109	22500	100	55.00	Rest is kept for Dal processing and sowing seeds in the next season.	-	Payment for Labour bill, payment for fertilizer, pesticide expenditures and also family need	08
1.	Chick Pea Var. Anuradha	28500	200	50.00	Rest is kept for Dal processing and sowing seeds in the next season.	-	Payment for Labour bill, payment for irrigation, fertilizer and pesticide expenditures.	12
2.	Lentil Var. WBL-77	27000	126	60.00	Rest is kept for Dal processing and sowing seeds in the next season.	-	Payment for Labour bill, payment for irrigation, fertilizer and pesticide expenditures.	15
3.	Field Pea Var. RACHNA	25000	150	45.00	Rest is kept for Dal processing and sowing seeds in the next season.	-	Payment for Labour bill, payment for irrigation, fertilizer and pesticide expenditures.	13
1	Kharif Sesame Var. SWB- 32-10-1	20200	80	48.00	Rest is kept for extracting oil and sowing seeds in the next season	-	Payment of labour bill, Fertilizer and pesticide cost and family need	16
1	Rabi oilseeds, Mustard Var. NC-1	23800	150	50.00	Rest is kept for extracting oil and sowing seeds in the next season.	-	Payment of labour bill, Fertilizer and pesticide cost	18

2	Linseed, var. Sekhar	12750	100	70.00	Rest is kept for extracting oil and sowing seeds in the next season.	-	Payment of labour bill, Fertilizer and pesticide cost	14

D. Farmers' perception of the intervention demonstrated

Sl. No.	Technologies demonstrated (with name)	Farmers' Perception parameters					
		Suitability to their farming system	Likings (Preference)	Affordability	Any negative effect	Is Technology acceptable to all in the group/village	Suggestions, for change/improvement, if any
1	Crop:- Kharif Black Gram Var. WBU- 109 + Herbicides pendimethalin as pre emergence @ 3lt/ha+Micronutrient spray Boron-20 @ 2g/lt water in 25 and 45 DAS	Suitable to a large extent.	Farmers prefer medium size of seeds and shiny blackcolour of the seeds of the variety.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients, plant protection chemicals, irrigation water, labour etc.	Availability of seeds should be ensured in time. Appropriate good quality *Rhizobium* culture should be ensured for supply among the farmers. Low cost quality herbicides and micro-nutrients should be encouraged for dissemination among the farming community. Availability of Dal mill to the farmers end will be most encouraging enterprise.
1.	Improved Var. Anuradha + Herbicide Whip Super (Fenoxaprop-P-ethyl) as early post emergence @ 0.5 lt /ha + Micronutrient spray Boron-20 @ 2 g/lt water in 25 and 45 DAS and need based fungicide spray Carbendazim+ Mancozeb 2 g/lt of	Suitable to a large extent.	Farmers prefer medium size of seeds and luxurious shiny colour of the seeds of the variety.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients, plant protection chemicals, irrigation water, labour etc.	Late sown varieties are required to be incorporated in cropping sequence after long duration Kharif Paddy. Shorter duration improved varieties should be popularized. Availability of seeds should be ensured in time. Appropriate good quality *Rhizobium* culture should be ensured for supply among the farmers. Low cost quality herbicides

	water for control of wilt						and micro-nutrients should be encouraged for dissemination among the farming community. Proper irrigation facilities should be created by the Governmental agencies.
2.	Improved variety WBL 77 + Herbicide Whip Super (Fenoxaprop-P-ethyl) as early post emergence @ 0.5 lt /ha + Micronutrient spray Boron-20 @ 2 g/lt water in 25 and 45 DAS and need based fungicide spray Carbendazim+ Mancozeb 2 g/lt of water for control	Suitable to a large extent.	Farmers prefer bold sized seeds and attractive brown colour of the seeds of the variety. Besides these, it can be easily boiled saving fuel.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients, plant protection chemicals, irrigation water, labour etc.	Late sown varieties are required to be incorporated in cropping sequence after long duration Kharif Paddy. Shorter duration improved varieties should be popularized. Availability of seeds should be ensured in time. Appropriate good quality *Rhizobium* culture should be ensured for supply among the farmers. Low cost quality herbicides and micro-nutrients should be encouraged for dissemination among the farming community. Proper irrigation facilities should be created by the Governmental agencies.
3	Improved variety Rachna + Herbicide Whip Super (Fenoxaprop-P-ethyl) as early post emergence @ 0.5 lt /ha + Micronutrient spray Boron-20 @ 2 g/lt water in 25 and 45 DAS and need based fungicide spray Carbendazim+	Suitable to a large extent.	Farmers prefer this variety due to its potential for more yield in less areas. Its seeds can be easily boiled and used for preparation of "Ghoogny", a local delicacy.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients, plant protection chemicals, irrigation water, labour etc.	Availability of seeds should be ensured in time. Appropriate good quality *Rhizobium* culture should be ensured for supply among the farmers. Low cost quality herbicides and micro-nutrients should be encouraged for dissemination among the farming community. Proper irrigation facilities should be created by the Governmental agencies.

	Mancozeb 2 g/lt of water for control of wilt						
1	Kharif Sesame Var. SWB- 32-10-1 + + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	Suitable to a large extent	Farmers prefer the new improved variety of sesame i.e. Savitri as the existing variety of local check tillotoma gives a yield and takes more time than new variety Savitri.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients etc. But a good demand of the crop in the market is found.	Availability of seeds should be ensured in time. Low cost quality herbicides and micro-nutrients should be encouraged for dissemination among the farming community. Proper irrigation facilities should be created by the Governmental agencies.
1.	Rabi Oilseeds, Mustard, Var. NC-1 + Herbicides, Micronutrient spray	Suitable to a large extent.	Farmers prefer white colored seeds of Mustards.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients, plant protection chemicals, irrigation water, labourtc.	Shorter duration improved varieties should be popularized. Availability of seeds should be ensured in time. Low cost quality herbicides and micro-nutrients should be encouraged for dissemination among the farming community. Proper irrigation facilities should be created by the Governmental agencies.

2.	Rabi oilseeds Linseed, Var. Sekhar + Herbicides, Micronutrient spray	Suitable to a large extent.	Farmers prefer the new improved variety of Linseed i.e. Deepika / Sekhar; as the existing variety of Local Improved gives a very poor yield.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients etc. The demand in local market of the crop is not satisfactory.	Shorter duration improved varieties should be popularized. Availability of seeds should be ensured in time. Low cost quality herbicides and micro-nutrients should be encouraged for dissemination among the farming community. Proper irrigation facilities should be created by the Governmental agencies.

E. Specific Characteristics of Technology and Performance

Specific Characteristic	Performance	Performance of Technology vis-a vis Local Check	Farmers Feedback
Duration	Shorter	New variety: 70 days Local check: 95 days	91% increase in yield was obtained through the new technology than local check. The new variety fetched more benefit in shorter duration i.e. additional net return Rs. 28375/ha than local check which is very much encouraging for black gram cultivation in monocropped upland and medium land in kharif season instead of rice.
No. of branches/ plant	Highly branched	New technology: 16 Local check: 8	
No. of pods /plant	Higher	New technology: 40 Local check: 21	
Crop: Rabi Pulse Chick pea, Var. Anuradha			83.4 % increase in yield was obtained through the new technology than local check. The new variety fetched more benefit in shorter duration i.e. additional net return Rs. 32958/ha than local check which is very much encouraging for chickpea cultivation after short duration kharif rice.
No. of branches/ plant	Highly branched	New technology: 20 Local check: 9	
No. of pods /plant	Higher	New technology: 43 Local check: 21	
Crop: Lentil, Var.WBL 77			82.4 % increase in yield was obtained through the new technology than local check. The new variety fetched more benefit in shorter duration i.e. additional net return Rs. 34638/ha than local check which is very much encouraging for lentil cultivation under rice fallow situation
1.No. of branches/ plant	Highly branched	New technology: 15 Local check: 8	
No. of pods /plant	Higher	New technology: 38 Local check: 17	
Crop: Field pea, var. Rachna			204 % increase in yield was obtained through the new technology than local check. It is

1.No. of branches/ plant	Highly branched	New technology: 24 Local check: 9	almost new introduction to most of the farmers. The new variety fetched more benefit in shorter duration i.e.
No. of pods /plant	Higher	New technology: 35 Local check: 16	
Crop: Kharif Sesame			
i) Duration	Satisfactory	Technology: 85 days Local Check: 95 days	40.2 % increase in yield was obtained through the new technology than local check. The new variety fetched more benefit in shorter duration i.e. additional net return Rs. 13120/ha than local check which is very much encouraging for sesame cultivation in kharif season instead of rice.
ii) No. of siliqua/plant	High	Technology: 38 Local Check: 26	
iii) Colour of the seed	Attractive	Technology: White Local Check: Brown	
Rabi Oilseeds, Crop: Mustard, Var. NC-1			16 % increase in yield was obtained through the new technology than local check. The new variety fetched more benefit in shorter duration i.e. additional net return Rs. 7251/ha than local check which is very much encouraging for mustard cultivation even in rice fallow situation
1.Plant height (cm):	Height is less	New technology: 75 Local check:90	
2.No. of branches/ plant:	Highly branched	New technology: 5 Local check: 4	
3.No. of pods /plant: 20-25	Higher	New technology: 27 Local check: 22	
Crop: Linseed, Var. Sekhar			89 % increase in yield was obtained through the new technology than local check. The new variety fetched more benefit in shorter duration i.e. additional net return Rs. 26814/ha than local check which is very much encouraging for linseed cultivation even under rice fallow situation
1. Plant height (cm):	Height is more	New technology:35 Local:25	
2.No. of branches/ plant:	Highly branched	New technology:15 Local check: 7	
3.No. of pods /plant:	Higher	New technology: 31 Local check: 16	

F. Extension activities under FLD conducted till dates:

Sl. No.	Extension Activities organized	Date and place of activity	Number of farmers attended
1	Sowing & Fertilizer Management of Kharif Black gram	07/08/2018	22
2	Rhizobium inoculation and sowing of kharif black gram	19/08/2018	28
3	Sowing and phosphate management of black gram cultivation in post kharif	07/09/2018	28
4	Cropping system and crop diversification using kharif pulse	13/10/2018	12
	Rabi Pulses		
1	Broadcasting programme in Potentiality of rabi pulse cultivation in Birbhum District	18.08.2018	Not assessed

		AIR, FM Santiniketan	
2	Broadcasting Live Phone in Programme on Pulse cultivation in rice-fallow situation	29.09.2018 AIR, FM Santiniketan	Not assessed
3	Training programme on Fodder + lentil intercropping	26.11.2018 Rathindra KVK	23
4	Training programme on land preparation, sowing and phosphate management of field pea	27.11.2018 Rathindra KVK	17
5	Field day on sowing and phosphate management in chickpea	1.12.2018 Kamalakantapur	30
6	Training Programme nutrient management in lentil	3.12.2018 Rathindra KVK	13
7	Training Programme on micronutrient application in lentil	9.12.2018 Rathindra KVK	14
8	Training Programme on herbicide application in chickpea	10.12.2018 Rathindra KVK	50
9	Field day on micronutrient spray in rabi pulses	18.12.2018 Kankutia	20
	Kharif Oilseeds		
1	Land preparation and sowing of improved seeds	10/08/2018	-
2	Fertilizer application	11/08/2018	-
3	Improved variety and sowing of kharif sesame	13/08/2018	28
4	Land preparation, sowing and herbicide application in kharif sesame	14/08/2018	28
5	Sowing and fertilizer management of sesame in post kharif season	08/09/2018	14
6	Vegetative growth stage	24/09/2018	
7	Cropping system and crop diversification using kharif oilseed	13/10/2018	12
8	Harvesting Stage	05/11/2018	
	Rabi Oilseeds		
1	Training Programmeon sowing and fertilizer management of mustard	28.11.2018 Rathindra KVK	11
2	Training Programme on sowing and fertilizer management of linseed	7.12.2018 Rathindra KVK	25
3	Training Programme on intercultural operation in mustard	8.12.2018 Rathindra KVK	11
4	Training Programme on micronutrient spray in rabi oilseeds	18.12.2018 Rathindra KVK	20

5	Training programme on potentiality of oilseed production in rabi season	29.1.2019 Rathindra KVK	21

G. Sequential Good Quality Photographs: (as per stages i.e growth & Development)


Cluster FLD on Oilseeds
Rabi, 2018-2019
Crop-Mustard, Var-NC-1
RATHINDRA KRISHI VIGYAN KENDRA
PALLI SIKSHA BHAVANA
(Institute of Agriculture)
Visva-Bharati, Sriniketan, Birbhum, West Bengal


Cluster FLD on Pulse


Cluster FLD on Pulse
KHARIF_2018-19
Crop- Black Gram
Var-WBU-109
Rathindra Krishi Vigyan Kendra
PSB, Visva-Bharati, Sriniketan, Birbhum

H. Farmers Training Photographs:

I. Quality Action Photographs of field visit/ field days and technology demonstrated

J. Details of Budget Utilization

Crop (provide crop wise information)	Items	Budget Received (Rs.)	Budget Utilization (Rs.)	Balance (Rs.)
Kharif Pulse, Black gram	i) Critical input	162000.00	97785.00	64215.00
	ii) TA/DA/POL etc. for monitoring	18000.00	4410.00	13590.00
	iii) Extension Activities (Field day, training etc)			
	iv)Publication of literature etc.			
	Total	**180000.00**	**102195.00**	**77805.00**
Rabi Pulse, Chick pea	i) Critical input	162000.00	127101.00	34899.00
	ii) TA/DA/POL etc. for monitoring	18000.00	21690.00	(-)3690.00
	iii) Extension Activities (Field day, training etc)			
	iv)Publication of literature etc.			
	Total	**180000.00**	**148791.00**	**31209.00**
Rabi Pulse, Lentil	i) Critical input	162000.00	77400.00	84600.00
	ii) TA/DA/POL etc. for monitoring	18000.00	7110.00	10890.00
	iii) Extension Activities (Field day, training etc)			
	iv)Publication of literature etc.			
	Total	**180000.00**	**84510.00**	**95490.00**
Rabi Pulse, Field Pea	i) Critical input	162000.00	174000.00	(-) 12000.00
	ii) TA/DA/POL etc. for monitoring	18000.00	401.00	17599.00
	iii) Extension Activities (Field day, training etc)			
	iv)Publication of literature etc.			
	Total	**180000.00**	**174401.00**	**5599.00**
Kharif Oilseed, Sesame	i) Critical input	90000.00	65409.00	24591.00

	ii) TA/DA/POL etc. for monitoring	10000.00	4620.00	5380.00
	iii) Extension Activities (Field day, training etc)			
	iv)Publication of literature etc.			
	Total	**100000.00**	**70029.00**	**29971.00**
Rabi Oilseeds, Mustard	i) Critical input	108000.00	39682.00	68318.00
	ii) TA/DA/POL etc. for monitoring	12000.00	18896.00	(-) 6896.00
	iii) Extension Activities (Field day, training etc)			
	iv)Publication of literature etc.			
	Total	**120000.00**	**58578.00**	**61422.00**
Rabi Oilseeds, Linseed	i) Critical input	67500.00	55305.00	12195.00
	ii) TA/DA/POL etc. for monitoring	7500.00	13716.00	(-) 6216.00
	iii) Extension Activities (Field day, training etc)			
	iv)Publication of literature etc.			
	Total	**75000.00**	**69021.00**	**5979.00**

3.3 Achievements on Training (Including the sponsored and FLD training programmes):

A) Farmers and farm women (on campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
I. Crop Production													
Weed Management													
Resource Conservation Technologies													
Cropping Systems													
Crop Diversification	09	102	20	122	17	06	23	05	10	15	124	36	160
Integrated Farming													
Water management													
Seed production	02	21	08	29	13	01	14	04	02	06	36	13	49
Nursery management													
Integrated Crop Management	06	46	22	68	16	03	19	13	03	16	75	27	102
Fodder production													
Production of organic inputs													
Others, (cultivation of crops)													
II. Horticulture													
a) Vegetable Crops													
Integrated nutrient management													
Water management													
Enterprise development													
Skill development													
Yield increment													
Production of low volume and high value crops													
Off-season vegetables													
Nursery raising													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)													
Others, if any (Cultivation of Vegetable)													
Training and Pruning													
b) Fruits													
Layout and Management of Orchards													
Cultivation of Fruit													
Management of young plants/orchards													
Rejuvenation of old orchards													
Export potential fruits													
Micro irrigation systems of orchards													
Plant propagation techniques													
Others, if any(INM)													
c) Ornamental Plants													
Nursery Management													
Management of potted plants													
Export potential of ornamental plants													
Propagation techniques of Ornamental Plants													
Others, if any													
d) Plantation crops													
Production and Management technology													
Processing and value addition													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Others, if any													
e) Tuber crops													
Production and Management technology													
Processing and value addition													
Others, if any													
f) Spices													
Production and Management technology													
Processing and value addition													
Others, if any													
g) Medicinal and Aromatic Plants													
Nursery management													
Production and management technology													
Post harvest technology and value addition													
Others, if any													
III. Soil Health and Fertility Management													
Soil fertility management													
Soil and Water Conservation													
Integrated Nutrient Management	01	06	06	12	01	00	01	01	00	01	08	06	14
Production and use of organic inputs													
Management of Problematic soils													
Micro nutrient deficiency in crops													
Nutrient Use Efficiency													
Soil and Water Testing													
Others, if any													
IV. Livestock Production and Management													
Dairy Management	01	05	00	05	03	00	03	02	00	02	10	00	10
Poultry Management	01	13	02	15	03	00	03	00	03	03	16	05	21
Piggery Management													
Rabbit Management													
Disease Management	02	23	04	27	14	03	17	11	05	16	48	12	60
Feed management	02	42	00	42	10	00	10	13	01	14	65	01	66
Production of quality animal products													
Others, if any Goat and Sheep farming	01	06	00	06	13	00	13	08	03	11	27	03	30
V. Home Science/Women empowerment													
Household food security by kitchen gardening and nutrition gardening	01	00	20	20	00	05	05	00	00	00	00	25	25
Design and development of low/minimum cost diet	01	00	16	16	00	09	09	00	00	00	00	25	25
Designing and development for high nutrient efficiency diet													
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs													
Storage loss minimization techniques													
Enterprise development													
Value addition													
Income generation activities for empowerment of rural Women													
Location specific drudgery reduction technologies													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Rural Crafts													
Capacity building													
Women and child care													
Others, if any													
VI.Agril. Engineering													
Installation and maintenance of micro irrigation systems													
Use of Plastics in farming practices													
Production of small tools and implements													
Repair and maintenance of farm machinery and implements													
Small scale processing and value addition													
Post Harvest Technology													
Others, if any													
VII. Plant Protection													
Integrated Pest Management	01	22	00	22	08	00	08	00	00	00	30	00	30
Integrated Disease Management													
Bio-control of pests and diseases													
Production of bio control agents and bio pesticides													
Others, if any													
VIII. Fisheries													
Integrated fish farming	01	12	00	12	08	00	08	00	00	00	20	00	20
Carp breeding and hatchery management													
Carp fry and fingerling rearing	01	23	00	23	01	00	01	00	00	00	24	00	24
Composite fish culture & fish disease	02	65	00	65	11	00	11	02	00	02	77	00	77
Fish feed preparation & its application to fish pond, like nursery, rearing & stocking pond	01	27	00	27	03	00	03	00	00	00	30	00	30
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes													
Portable plastic carp hatchery													
Pen culture of fish and prawn													
Shrimp farming													
Edible oyster farming													
Pearl culture													
Fish processing and value addition													
Others, if any													
IX. Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production													
Bio-pesticides production													
Bio-fertilizer production													
Vermi-compost production													
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Production of Fish feed													
Others, if any													
X. Capacity Building and Group Dynamics													
Leadership development													
Group dynamics	04	21	07	28	14	03	17	103	41	144	139	51	190
Formation and Management of SHGs													
Mobilization of social capital													
Entrepreneurial development of farmers/youths	02	07	00	07	00	28	28	00	11	11	17	29	46
WTO and IPR issues													
Others, if any (Crop Insurance)	02	11	00	11	04	03	07	43	06	49	58	27	85
Others if any (Market Information)	01	16	00	16	00	00	00	00	00	00	16	00	16
Others if any (Kisan Credit Card)	01	02	00	02	03	07	10	27	08	35	32	15	47
XI Agro-forestry													
Production technologies													
Nursery management													
Integrated Farming Systems													
XII. Others (Pl. Specify)													
TOTAL	43	470	105	575	142	68	210	232	93	325	852	275	1127

B) Rural Youth (on campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Mushroom Production													
Bee-keeping													
Integrated farming													
Seed production													
Production of organic inputs	01	11	01	12	04	00	04	04	00	04	19	01	20
Integrated Farming													
Planting material production													
Vermi-culture													
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops													
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing	01	03	00	03	01	06	07	04	16	20	08	22	30
Quail farming													
Piggery													
Rabbit farming													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Poultry production													
Ornamental fisheries													
Enterprise development													
Para vets													
Para extension workers	01	08	00	08	07	00	07	05	00	05	20	00	20
Composite fish culture													
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Others (Hatchery Production Worker)	01	12	00	12	08	00	08	00	00	00	20	00	20
TOTAL	04	34	01	35	20	06	26	13	16	29	67	23	90

C) Extension Personnel (on campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Productivity enhancement in field crops													
Integrated Pest Management	14	471	00	471	28	00	28	00	00	00	499	00	499
Integrated Nutrient management	02	63	00	63	04	00	04	00	00	00	67	00	67
Rejuvenation of old orchards													
Value addition													
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization	01	27	00	27	01	00	01	00	00	00	28	00	28
Information networking among farmers	01	36	00	36	02	00	02	00	00	00	38	00	38

Capacity building for ICT application													
Care and maintenance of farm machinery and implements													
WTO and IPR issues													
Management in farm animals													
Livestock feed and fodder production	01	32	00	32	02	00	02	00	00	00	34	00	34
Women and Child care													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs													
Gender mainstreaming through SHGs													
Others if any (Important Fruit Crops and Package of Practices and Lay put and Preparation of Seed Bed for Vegetables etc.)	02	74	00	74	04	00	04	00	00	00	78	00	78
Others if any (Composite Fish Culture)	01	26	00	26	01	00	01	00	00	00	27	00	27
Others if any (Hazards of Pesticide in Animal Husbandry and Its Remedies)	01	35	00	35	02	00	02	00	00	00	37	00	37
Others if any (Type of Problem Soils and its Management)	01	26	00	26	02	00	02	00	00	00	28	00	28
Others if any (Tasting Various Attributes of Quality Seeds)	01	26	00	26	02	00	02	00	00	00	28	00	28
Others if any (Effective Water Management in Field Crops)	01	32	00	32	02	00	02	00	00	00	34	00	34
Others if any (Farm Mechanization)	01	32	00	32	02	00	02	00	00	00	34	00	34
Others if any (Economic Cultivation of Rice)	01	25	00	25	02	00	02	00	00	00	27	00	27
TOTAL	28	905	00	905	54	00	54	00	00	00	959	00	959

D) Farmers and farm women (off campus)

Thematic Area	**No. of Courses**	**No. of Participants**									**Grand Total**		
		Other			**SC**			**ST**					
		M	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**
I. Crop Production													
Weed Management	01	22	00	22	02	00	02	04	000	04	28	00	28
Resource Conservation Technologies													
Cropping Systems	01	09	00	09	00	00	00	03	00	03	12	00	12

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Crop Diversification	03	50	12	62	12	09	21	25	00	25	87	21	108
Integrated Farming													
Water management													
Seed production													
Nursery management													
Integrated Crop Management	01	06	00	06	02	20	22	00	00	00	08	20	28
Fodder production	01	32	00	32	02	00	02	00	00	00	34	00	34
Production of organic inputs													
Others, (Rhizobium Inoculation)	01	27	00	27	01	00	01	00	00	00	28	00	28
II. Horticulture													
a) Vegetable Crops													
Integrated nutrient management													
Water management													
Enterprise development													
Skill development													
Yield increment													
Production of low volume and high value crops													
Off-season vegetables													
Nursery raising													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)													
Others, if any (Cultivation of Vegetable)													
Training and Pruning													
b) Fruits													
Layout and Management of Orchards													
Cultivation of Fruit													
Management of young plants/orchards													
Rejuvenation of old orchards													
Export potential fruits													
Micro irrigation systems of orchards													
Plant propagation techniques													
Others, if any(INM)													
c) Ornamental Plants													
Nursery Management													
Management of potted plants													
Export potential of ornamental plants													
Propagation techniques of Ornamental Plants													
Others, if any													
d) Plantation crops													
Production and Management technology													
Processing and value addition													
Others, if any													
e) Tuber crops													
Production and Management technology													
Processing and value addition													
Others, if any													
f) Spices													
Production and Management technology													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Processing and value addition													
Others, if any													
g) Medicinal and Aromatic Plants													
Nursery management													
Production and management technology													
Post harvest technology and value addition													
Others, if any													
III. Soil Health and Fertility Management													
Soil fertility management													
Soil and Water Conservation	01	32	00	32	02	00	02	00	00	00	34	00	34
Integrated Nutrient Management													
Production and use of organic inputs	01	43	00	43	07	00	07	00	00	00	50	00	50
Management of Problematic soils													
Micro nutrient deficiency in crops													
Nutrient Use Efficiency	01	36	00	36	14	00	14	00	00	00	50	00	50
Soil and Water Testing													
Others, if any													
IV. Livestock Production and Management													
Dairy Management													
Poultry Management	02	25	00	25	13	01	14	01	01	02	48	32	80
Piggery Management	01	00	00	00	00	00	00	00	30	30	00	30	30
Rabbit Management													
Disease Management	01	00	00	00	00	00	00	22	28	50	22	28	50
Feed management													
Production of quality animal products													
Others, if any Goat farming	01	09	00	09	21	03	24	13	04	17	43	07	50
V. Home Science/Women empowerment													
Household food security by kitchen gardening and nutrition gardening	01	00	00	00	00	00	00	00	50	50	00	50	50
Design and development of low/minimum cost diet													
Designing and development for high nutrient efficiency diet													
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs													
Storage loss minimization techniques													
Enterprise development													
Value addition													
Income generation activities for empowerment of rural Women													
Location specific drudgery reduction technologies													
Rural Crafts													
Capacity building													
Women and child care	01	00	00	00	00	00	00	00	50	50	00	50	50
Others, if any (Awareness Programme on Food Security)	01	00	00	00	00	00	00	21	22	43	21	22	43
VI.Agril. Engineering													
Installation and maintenance of micro irrigation systems													
Use of Plastics in farming practices													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Production of small tools and implements													
Repair and maintenance of farm machinery and implements													
Small scale processing and value addition													
Post Harvest Technology													
Others, if any (Farm Mechanization)	01	32	00	32	02	00	02	00	00	00	34	00	34
VII. Plant Protection													
Integrated Pest Management	02	07	01	08	05	22	27	33	23	56	45	46	91
Integrated Disease Management													
Bio-control of pests and diseases													
Production of bio control agents and bio pesticides													
Others, if any													
VIII. Fisheries													
Integrated fish farming													
Carp breeding and hatchery management													
Carp fry and fingerling rearing													
Composite fish culture & fish disease	02	57	01	58	40	10	50	02	00	02	99	11	110
Fish feed preparation & its application to fish pond, like nursery, rearing & stocking pond													
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes													
Portable plastic carp hatchery													
Pen culture of fish and prawn	01	00	00	00	00	00	00	00	55	55	00	55	55
Shrimp farming													
Edible oyster farming													
Pearl culture													
Fish processing and value addition													
Others, if any													
IX. Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production													
Bio-pesticides production													
Bio-fertilizer production													
Vermi-compost production													
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder													
Production of Fish feed													
Others, if any													
X. Capacity Building and Group Dynamics													
Leadership development													
Group dynamics													
Formation and Management of SHGs													
Mobilization of social capital													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Entrepreneurial development of farmers/youths													
WTO and IPR issues													
Others, if any (Market Led Extension)	02	25	24	49	00	13	13	00	35	35	25	72	97
XI Agro-forestry													
Production technologies													
Nursery management													
Integrated Farming Systems													
XII. Others (Pl. Specify)													
TOTAL	27	412	38	450	123	78	201	124	298	422	668	444	1112

E) RURAL YOUTH (Off Campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Mushroom Production													
Bee-keeping													
Integrated farming													
Seed production													
Production of organic inputs													
Integrated Farming													
Planting material production													
Vermi-culture													
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops													
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing													
Quail farming													
Piggery													
Rabbit farming													
Poultry production													
Ornamental fisheries													
Para vets													
Para extension workers													
Composite fish culture													
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Fry and fingerling rearing													
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Others, if any													
TOTAL	00	00	00	00	00	00	00	00	00	00	00	00	00

F) Extension Personnel (Off Campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Productivity enhancement in field crops													
Integrated Pest Management													
Integrated Nutrient management													
Rejuvenation of old orchards													
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization													
Information networking among farmers													
Capacity building for ICT application													
Care and maintenance of farm machinery and implements													
WTO and IPR issues													
Management in farm animals													
Livestock feed and fodder production													
Household food security													
Women and Child care													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs													
Gender mainstreaming through SHGs													
Crop intensification													
TOTAL	00	00	00	00	00	00	00	00	00	00	00	00	00

G) Consolidated table (ON and OFF Campus)

i. Farmers & Farm Women

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
I. Crop Production													
Weed Management													
Resource Conservation Technologies	01	07	05	12	04	11	15	00	07	07	11	23	34
Cropping Systems	01	09	00	09	00	00	00	03	00	03	12	00	12
Crop Diversification	12	152	32	191	29	15	44	30	10	40	211	57	268
Integrated Farming													
Water management													
Seed production	02	21	04	25	13	01	14	04	02	06	38	11	49
Nursery management													
Integrated Crop Management	07	52	22	74	18	23	41	13	03	16	83	47	130
Fodder production													
Production of organic inputs	01	25	00	25	03	00	03	00	00	00	28	00	28
Others, (Improved Method of Pulse and Oilseed cultivation in Kharif Season)	01	13	06	19	04	06	10	01	04	05	18	16	34
Others, (Rhizobium Inoculation and Sowing Kharif Black Gram)	01	27	00	27	01	00	01	00	00	00	28	00	28
TOTAL													
II. Horticulture													
a) Vegetable Crops													
Integrated nutrient management													
Water management													
Enterprise development													
Skill development													
Yield increment													
Production of low volume and high value crops													
Off-season vegetables													
Nursery raising													
Exotic vegetables like Broccoli													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)													
Others, if any (Cultivation of Vegetable)													
TOTAL													
b) Fruits													
Training and Pruning													
Layout and Management of Orchards													
Cultivation of Fruit													
Management of young plants/orchards													
Rejuvenation of old orchards													
Export potential fruits													
Micro irrigation systems of orchards													
Plant propagation techniques													
Others, if any(INM)													
TOTAL													
c) Ornamental Plants													
Nursery Management													
Management of potted plants													
Export potential of ornamental plants													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Propagation techniques of Ornamental Plants													
Others, if any													
TOTAL													
d) Plantation crops													
Production and Management technology													
Processing and value addition													
Others, if any													
TOTAL													
e) Tuber crops													
Production and Management technology													
Processing and value addition													
Others, if any													
TOTAL													
f) Spices													
Production and Management technology													
Processing and value addition													
Others, if any													
TOTAL													
g) Medicinal and Aromatic Plants													
Nursery management													
Production and management technology													
Post harvest technology and value addition													
Others, if any													
TOTAL													
III. Soil Health and Fertility Management													
Soil fertility management													
Soil and Water Conservation													
Integrated Nutrient Management													
Production and use of organic inputs	01	43	00	43	07	00	07	00	00	00	50	00	50
Management of Problematic soils													
Micro nutrient deficiency in crops													
Nutrient Use Efficiency	01	36	00	36	14	00	14	00	00	00	50	00	50
Soil and Water Testing													
Others, if any													
TOTAL													
IV. Livestock Production and Management													
Dairy Management	01	05	00	05	03	03	03	02	00	02	10	00	10
Poultry Management	03	38	02	40	16	01	17	10	04	14	64	37	101
Piggery Management	01	00	00	00	00	00	00	00	30	30	00	30	30
Rabbit Management													
Disease Management	03	23	04	27	14	03	17	33	33	66	70	40	110
Feed management	02	42	00	42	10	00	10	13	01	14	65	01	66
Production of quality animal products													
Others, if any (Goat and Sheep farming)	02	15	00	15	34	03	37	21	07	28	70	10	80
TOTAL													
V. Home Science/Women													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
empowerment													
Household food security by kitchen gardening and nutrition gardening	02	00	20	20	00	05	05	00	50	50	00	75	75
Design and development of low/minimum cost diet	01	00	16	16	00	09	09	00	00	00	00	25	25
Designing and development for high nutrient efficiency diet													
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs													
Storage loss minimization techniques													
Enterprise development													
Value addition													
Income generation activities for empowerment of rural Women													
Location specific drudgery reduction technologies													
Rural Crafts													
Capacity building													
Women and child care	01	00	00	00	00	00	00	00	50	50	00	50	50
Others, if any (Awareness Programme on Food Security)	01	00	00	00	00	00	00	21	22	43	21	22	43
TOTAL													
VI.Agril. Engineering													
Installation and maintenance of micro irrigation systems													
Use of Plastics in farming practices													
Production of small tools and implements													
Repair and maintenance of farm machinery and implements													
Small scale processing and value addition													
Post Harvest Technology													
Others, if any													
TOTAL													
VII. Plant Protection													
Integrated Pest Management	03	29	01	30	13	22	35	33	23	56	75	46	121
Integrated Disease Management													
Bio-control of pests and diseases													
Production of bio control agents and bio pesticides													
Others, if any													
TOTAL													
VIII. Fisheries													
Integrated fish farming	01	12	00	12	08	00	08	00	00	00	20	00	20
Carp breeding and hatchery management													
Carp fry and fingerling rearing	01	23	00	23	01	00	01	00	00	00	24	00	24
Composite fish culture & fish disease	05	96	00	96	51	10	61	04	55	59	151	65	216
Fish feed preparation & its application to fish pond, like nursery, rearing & stocking pond	01	27	00	27	03	00	03	00	00	00	30	00	30
Hatchery management and culture													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
of freshwater prawn													
Breeding and culture of ornamental fishes													
Portable plastic carp hatchery													
Pen culture of fish and prawn													
Shrimp farming													
Edible oyster farming													
Pearl culture													
Fish processing and value addition													
Others, if any													
TOTAL													
IX. Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production													
Bio-pesticides production													
Bio-fertilizer production													
Vermi-compost production													
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder													
Production of Fish feed													
Others, if any													
TOTAL													
X. Capacity Building and Group Dynamics													
Leadership development													
Group dynamics	04	21	07	28	14	03	17	103	41	144	139	51	190
Formation and Management of SHGs													
Mobilization of social capital													
Entrepreneurial development of farmers/youths	03	00	35	35	00	13	13	10	35	45	10	72	82
WTO and IPR issues													
Others, if any (Market Led Extension and Crop Insurance)	04	13	18	31	23	10	33	70	14	84	106	42	148
TOTAL													
XI Agro-forestry													
Production technologies													
Nursery management													
Integrated Farming Systems													
TOTAL													
XII. Others (Pl. specify)													
TOTAL	67	729	172	908	283	138	418	371	391	762	1384	720	2104

ii. RURAL YOUTH (On and Off Campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Mushroom Production													
Bee-keeping													
Integrated farming													
Seed production													
Production of organic inputs	01	11	01	12	04	00	04	04	00	04	19	01	20
Planting material production													
Vermi-culture													
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops													
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing	01	03	00	03	01	06	07	04	16	20	08	22	30
Quail farming													
Piggery													
Rabbit farming													
Poultry production													
Ornamental fisheries													
Para vets													
Para extension workers	01	08	00	08	07	00	07	05	00	05	20	00	20
Composite fish culture													
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Enterprise development													
Others if any (Hatchery Production Worker)	01	12	00	12	08	00	08	00	00	00	20	00	20

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
TOTAL	04	34	01	35	20	06	26	13	16	29	67	23	90

iii. Extension Personnel (On and Off Campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Productivity enhancement in field crops													
Integrated Pest Management	14	471	00	471	28	00	28	00	00	00	499	00	499
Integrated Nutrient management	02	63	00	63	04	00	04	00	00	00	67	00	67
Rejuvenation of old orchards													
Value addition													
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization	01	27	00	27	01	00	01	00	00	00	28	00	28
Information networking among farmers	01	36	00	36	02	00	02	00	00	00	38	00	38
Capacity building for ICT application													
Care and maintenance of farm machinery and implements													
WTO and IPR issues													
Management in farm animals													
Livestock feed and fodder production	01	32	00	32	02	00	02	00	00	00	34	00	34
Household food security													
Women and Child care													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs													
Gender mainstreaming through SHGs													
Crop intensification													
Others if any (Important Fruit Crops and Package of Practices and Lay put and Preparation of Seed Bed for Vegetables etc.)	02	74	00	74	04	00	04	00	00	00	78	00	78
Others if any	01	26	00	26	01	00	01	00	00	00	27	00	27

(Composite Fish Culture)													
Others if any (Hazards of Pesticide in Animal Husbandry and Its Remedies)	01	35	00	35	02	00	02	00	00	00	37	00	37
Others if any (Type of Problem Soils and its Management)	01	26	00	26	02	00	02	00	00	00	28	00	28
Others if any (Tasting Various Attributes of Quality Seeds)	01	26	00	26	02	00	02	00	00	00	28	00	28
Others if any (Effective Water Management in Field Crops)	01	32	00	32	02	00	02	00	00	00	34	00	34
Others if any (Farm Mechanization)	01	32	00	32	02	00	02	00	00	00	34	00	34
Others if any (Economic Cultivation of Rice)	01	25	00	25	02	00	02	00	00	00	27	00	27
TOTAL	28	905	00	905	54	00	54	00	00	00	959	00	959

Please furnish the details of training programmes as Annexure in the proforma given below

Discipline	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					Male	Female	Total	Male	Female	Total

H) Vocational training programmes for Rural Youth

Details of training programmes for Rural Youth

Crop / Enterprise	**Identified Thrust Area**	**Training title***	**Duration (days)**	**No. of Participants**			**Self employed after training**			**Number of persons employed else where**
				Male	**Female**	**Total**	**Type of units**	**Number of units**	**Number of persons employed**	
Preparation of Organic Inputs	Organic Farming	Prparation and Use of Organic Inputs	21	19	01	20	12	12	12	08
Hatchery Production Worker	Fish Hatchery	Hatchery Production Worker - Fishery	25	20	00	20	00	00	00	10
Goatery	Goatery	Goatery	30	08	22	30	30	30	30	00
Agriculture Extension Worker	Agricultural Extension Work	Agriculture Extension Service Provider	25	20	00	20	04	04	04	16

Total	**101**	**67**	**23**	**90**	**46**	**46**	**46**	**34**

*training title should specify the major technology /skill transferred

I) Sponsored Training Programmes

Sl. No.	Title	Thematic area	Month	Duration (days)	Client	No. of courses	No. of Participants										Sponsoring Agency
					PF / RY / EF		Male			Female			Total				
							Others	SC	ST	Others	SC	ST	Others	SC	ST	Total	
01.	Biological control of pests	IPM	01.05.2018	01	EF	01	24	02	00	00	00	00	24	02	00	26	MANAGE, Hyderabad and SAMETI, Narendrapur
02.	Practical field visit on IPM	IPM	01.05.2018	01	EF	01	24	02	00	00	00	00	24	02	00	26	MANAGE, Hyderabad and SAMETI, Narendrapur
03.	Different Govt. scheme running in Birbhum district	Input Supply	08.05.2018 .	01	EF	01	36	02	00	00	00	00	36	02	00	38	MANAGE, Hyderabad and SAMETI, Narendrapur
04.	Improved Agrotechnology of Maize cultivation	Crop Production	08.05.2018 .	01	EF	01	36	02	00	00	00	00	36	02	00	38	MANAGE, Hyderabad and SAMETI, Narendrapur
05.	Role of input dealers as extension functionaries in Birbhum District	Para-Extension Worker	15.05.2018	01	EF	01	27	01	00	00	00	00	27	01	00	28	MANAGE, Hyderabad and SAMETI, Narendrapur
06.	Introduction of giant prawn in composite fish culture	Composite Fish Culture	15.05.2018	01	EF	01	27	01	00	00	00	00	27	01	00	28	MANAGE, Hyderabad and SAMETI, Narendrapur
07.	Diagnosis of nutrient deficiency symptoms	Nutrient Management in Crops	22.05.2018	01	EF	01	35	02	00	00	00	00	35	02	00	37	MANAGE, Hyderabad and SAMETI, Narendrapur
08.	Hazards of indiscriminate use of pesticides in Animal Sector and its remedy	Animal Health Management	22.05.2018	01	EF	01	35	02	00	00	00	00	35	02	00	37	MANAGE, Hyderabad and SAMETI, Narendrapur

09.	Use of fertilizers for improved agriculture	Fertilizer Management in Crops	29.05.2018	01	EF	01	28	02	00	00	00	00	28	02	00	30	MANAGE, Hyderabad and SAMETI, Narendrapur
10.	Proper use of different plant protection equipments	IPM	29.05.2018	01	EF	01	28	02	00	00	00	00	28	02	00	30	MANAGE, Hyderabad and SAMETI, Narendrapur
11.	Preparation of neem kernel extract	Bio-Pesticide Preparation	05.06.2018	01	EF	01	38	02	00	00	00	00	38	02	00	40	MANAGE, Hyderabad and SAMETI, Narendrapur
12.	Efficient water management in field crops	Irrigation Management for Crops	12.06.2018	01	EF	01	32	02	00	00	00	00	32	02	00	34	MANAGE, Hyderabad and SAMETI, Narendrapur
13.	Farm Mechanisation	Use of Farm Implements	12.06.2018	01	EF	01	32	02	00	00	00	00	32	02	00	34	MANAGE, Hyderabad and SAMETI, Narendrapur
14.	Economic cultivation practice of Rice	Crop Production Technology	19.06.2018	01	EF	01	25	02	00	00	00	00	25	02	00	27	MANAGE, Hyderabad and SAMETI, Narendrapur
15.	Pest and disease management of mango, litchi, banana, guava	IPM in Fruits	19.06.2018	01	EF	01	25	02	00	00	00	00	25	02	00	27	MANAGE, Hyderabad and SAMETI, Narendrapur
16.	Improved agro-technology of green fodder cultivation	Crop Production Technology	26.06.2018	01	EF	01	32	02	00	00	00	00	32	02	00	34	MANAGE, Hyderabad and SAMETI, Narendrapur
17.	Integrated Weed Management of kharif crops	Integrated Weed Management	26.06.2018	01	EF	01	32	02	00	00	00	00	32	02	00	34	MANAGE, Hyderabad and SAMETI, Narendrapur
18.	Pest management of commercial flowers like rose marigold etc.	IPM in Flowers	03.07.2018	01	EF	01	37	02	00	00	00	00	37	02	00	39	MANAGE, Hyderabad and SAMETI, Narendrapur

19.	Pest management of papaya, jackfruit and drumstick	IPM in Fruit Trees	03.07.2018	01	EF	01	37	02	00	00	00	00	37	02	00	39	MANAGE, Hyderabad and SAMETI, Narendrapur
20.	Waste decomposer and its use	Production of Organic Inputs	10.07.2018	01	EF	01	37	02	00	00	00	00	37	02	00	39	MANAGE, Hyderabad and SAMETI, Narendrapur
21.	Practical procedure of decomposer use	Production of Organic Inputs	17.07.2018	01	EF	01	37	02	00	00	00	00	37	02	00	39	MANAGE, Hyderabad and SAMETI, Narendrapur
22.	Important fruit crops of Birbhum and their package of practices	Production Technology of Fruit Crops	17.07.2018	01	EF	01	37	02	00	00	00	00	37	02	00	39	MANAGE, Hyderabad and SAMETI, Narendrapur
23.	Pest, disease and weed management of pulses	IPM in Pulses	14.08.2018	01	EF	01	37	02	00	00	00	00	37	02	00	39	MANAGE, Hyderabad and SAMETI, Narendrapur
24.	Layout and preparation of seedbed for vegetables, season flowers etc.	Production Technology of Vegetables and Flowers	14.08.2018	01	EF	01	37	02	00	00	00	00	37	02	00	39	MANAGE, Hyderabad and SAMETI, Narendrapur
25.	Types of problem soil and their management	Soil Health Management	04.09.2018	01	EF	01	26	02	00	00	00	00	26	02	00	28	MANAGE, Hyderabad and SAMETI, Narendrapur
26.	Testing on various attributes of quality seeds	Production Technology of Quality Seeds	04.09.2018	01	EF	01	26	02	00	00	00	00	26	02	00	28	MANAGE, Hyderabad and SAMETI, Narendrapur
27.	Soil health and its management	Soil Health Management	11.09.208	01	EF	01	29	02	00	00	00	00	29	02	00	31	MANAGE, Hyderabad and SAMETI, Narendrapur
28.	Identification of medicinal plants	Production Technology of Medicinal Plants	11.09.208	01	EF	01	29	02	00	00	00	00	29	02	00	31	MANAGE, Hyderabad and SAMETI, Narendrapur

29	Soil moisture conservation in dryland area	Irrigation Management in Crops	18.09.2018	01	EF	01	37	02	00	00	00	00	37	02	00	39	MANAGE, Hyderabad and SAMETI, Narendrapur
30.	Pest and disease management of frenchbean, capsicum and broccoli	IPM in Vegetables	18.09.2018	01	EF	01	37	02	00	00	00	00	37	02	00	39	MANAGE, Hyderabad and SAMETI, Narendrapur
31.	Integrated weed management in rabi field crops and vegetables	IWM in Crops and egetables	25.09.2018	01	EF	01	38	02	00	00	00	00	38	02	00	40	MANAGE, Hyderabad and SAMETI, Narendrapur
32.	Weed management in aquatic bodies and non- cropped areas	IWM in Ponds and Non-Cropped Areas	25.09.2018	01	EF	01	38	02	00	00	00	00	38	02	00	40	MANAGE, Hyderabad and SAMETI, Narendrapur
33.	Importance of Black Bengal goat rearing	Goatery	26.11.2018	01	PFW	01	00	00	00	38	02	00	38	02	00	40	ATMA, Birbhum
34.	Rearing of Khaki Campbell Ducks	Duckery	27.11.2018	01	PFW	01	00	00	00	30	00	00	30	00	00	30	ATMA, Birbhum
35.	Making of Herbarium	Identification of Pests and Diseases	27.11.2018	01	EF	01	38	02	00	00	00	00	38	02	00	40	MANAGE, Hyderabad and SAMETI, Narendrapur
36.	Fisheries Development in Derelict Waterbodies for Socio-Economic Improvement	Management of Derelict Waterbodies	27.12.2018	01	PF & PFW	01	32	25	02	01	10	00	33	35	02	70	ICAR – Central Inland Fisheries Research Institute (CIFRI), Barrackpore, 24 Parganas (North), west Bengal
37.	Over-view and final feed back of DAESI course	Para-Extension Worker	27.02.2019	01	EF	01	38	02	00	00	00	00	38	02	00	40	MANAGE, Hyderabad and SAMETI, Narendrapur
38.	**Total**			**34**		**37**	**1143**	**91**	**2**	**69**	**12**	**0**	**1212**	**103**	**2**	**1317**	

3.4. A. Extension Activities (including activities of FLD programmes)

Nature of Extension Activity	No. of activities	Farmers				Extension Officials			Total		
		M	F	T	SC / ST (% of total)	Male	Female	Total	Male	Female	Total
Field Day	17	452	194	646	SC – 30.65% ST – 28.17 %	04	02	06	456	196	652
Kisan Mela	01	704	302	1006	SC – 25.26 % ST – 10.11 %	04	02	06	708	305	1012
Kisan Ghosthi											
Exhibition											
Film Show											
Method Demonstrations											
Farmers Seminar											
Workshop											
Group meetings											
Lectures delivered as resource persons	21	481	206	687	SC – 12.51 % ST – 18.05 %	04	02	06	485	208	693
Advisory Services											
Scientific visit to farmers field	153	346	148	494	SC – 28.54 % ST – 26.52 %	04	02	06	350	150	500
Farmers visit to KVK	151	352	151	503	SC – 33.40 % ST – 36.18 %	04	02	06	356	153	509
Diagnostic visits											
Exposure visits											
Ex-trainees Sammelan											
Soil health Camp											
Animal Health Camp	06	158	68	226	SC – 11.95 % ST – 26.99 %	00	01	01	158	69	227
Agri mobile clinic											
Soil test campaigns											

Farm Science Club Conveners meet											
Self Help Group Conveners meetings											
Mahila Mandals Conveners meetings											
Celebration of important days (specify) International Soil Day - 2018	01	50	22	72	SC – 27.78 % ST – 13.89 %	04	01	05	54	23	77
Sankalp Se Siddhi											
Swatchta Hi Sewa	12	218	93	311	SC – 25.56 % ST – 13.81 %	04	01	05	222	94	316
Mahila Kisan Divas	01	00	63	63	SC – 24.00 % ST – 21.00 %	04	01	05	04	64	68
Any Other (Specify) District Kisan Mela and Inauguration of PM Kisan Samman Nidhi Scheme	01	183	78	261	SC – 23.37 % ST – 28.74 %	04	01	05	187	79	266
Any Other (Specify) Pre-Rabi Kisan Campaign	01	147	63	210	SC – 20.13% ST – 19.00 %	20	01	21	167	64	231
Any Other (Specify) Exposure Visit to RKVK by Members FIAC of different Blocks	19	467	200	667	SC – 12.29 % ST – 18.59 %	04	02	06	471	202	673
Total	**384**	**3558**	**1588**	**5146**	**SC – 20.85 %** **ST – 21.00 %**	**60**	**18**	**78**	**3618**	**1606**	**5224**

B. Other Extension activities

Nature of Extension Activity	No. of activities
Newspaper coverage	
Radio talks	13
TV talks	05
Popular articles	
Extension Literature	08
Other, if any	

3.5 a. Production and supply of Technological products

Village seed

Crop	Variety	Quantity of seed (q)	Value (Rs)	No. of farmers involved in village seed production	Number of farmers to whom seed provided			
					SC	ST	Other	Total
Paddy	MTU-7029, IR – 36, IET – 4786, GB – 1, MTU - 1010	239.00	7,04,000.00		-	-	-	Yet to be sold
Black Gram	WBU – 109	418.60	20,93,000.00		220	48	542	810
Sesame	Sabitri	349.00	13,96,000.00		221	50	549	820
Green Gram	Samrat, Panna	226.00	11,30,000.00		111	53	367	531
Lentil	WBL - 77	210.00	12,60,000.00		141	69	260	470
Total		**1442.60**	**65,83,000.00**		**693**	**220**	**1718**	**2631**

KVK farm

Crop	Variety	Quantity of Seed (q)	Value (Rs)	Number of Farmers Provided			
				SC	ST	Others	Total
Paddy	Rani Dhan	38.35	Rs. 1,15,050.00	13	03	30	46
Paddy	Gotra Bidhan – 3	02.00	Rs. 6,000.00				Kept in KVK go-down
Paddy	Radhunipagol	01.00	Rs. 4,000.00				Kept in KVK go-down
Ekangi	*K. galanga*	02.00	Rs. 22,000.00	10	02	28	40
Linseed	Sekhar	00.40	Rs. 2,000.00				Kept in KVK go-down
Elephant Foot Yam	Bidhan Kusum	01.00	Rs. 10,000.00	03	01	06	10
Green Gram	Samrat	00.28	Rs. 4,200.00	02	01	04	07
Grand Total		**45.03**	**Rs. 1,63,250.00**	**28**	**07**	**68**	**103**

Production of planting materials by the KVKs

Crop	Variety	No. of planting materials	Value (Rs)	Number of farmers to whom planting material provided			
				SC	ST	Other	Total
Vegetable seedlings							
Cauliflower							
Cabbage	Sonar 8989	2000	8,000.00	12	05	23	40
Tomato	PS 31	3000	12,000.00	25	10	25	60
Brinjal	Blue Master UT	2000	8,000.00	24	09	47	80
Chilli	Suryamukhi	3000	12,000.00	15	20	25	60
Onion							
Others (Broccoli)	Green Magic	1000	4,000.00	14	06	20	40
Fruits							
Mango							
Guava							
Lime							
Papaya							
Banana							
Others							
Ornamental plants							
Medicinal and Aromatic							
Plantation							
Spices							
Turmeric							
Tuber							
Elephant yams							
Fodder crop saplings							
Forest Species							
Others, pl. specify							
Total				90	50	140	280

Production of Bio-Products

Name of product	Quantity Kg	Value (Rs.)	No. of Farmers benefitted			
			SC	ST	Other	Total
Bio-fertilizers (*Azolla)*	800.00	40,000.00	12	03	33	48
Bio-pesticide						
Bio-fungicide						
Bio-agents (Earth-Worm)	3500 in Numbers	1,750.00	10	02	23	35
Others, please specify (Vermi-Compost)	1500.00	15,000.00	20	10	20	50
Total			42	15	76	133

Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers benefitted			
				SC	ST	Other	Total
Dairy animals							
Cows							
Buffaloes							
Calves							
Others (Pl. specify)							
Small ruminants							
Sheep							
Goat							
Other, please specify							
Poultry							
Broilers							
Layers							
Duals (broiler and layer)							
Japanese Quail	*Coturnix coturnix japonica*	240	12,000.00	03	02	05	10
Turkey							
Emu							
Ducks							
Others (Pl. specify)							
Piggery							
Piglet							
Hog							
Others (Pl. specify)							
Fisheries							
Indian carp		02.00 q	20,000.00				
Exotic carp		01.30 q	13,000.00				
Mixed carp							
Fish fingerlings							
Spawn		6,00,000	7,200.00	20	12	28	60
Others (Small Fishes)		00.68 q	5,000.00				
Grand Total				23	14	33	70

3.5. b. Seed Hub Programme - *"Creation of Seed Hubs for Increasing Indigenous Production of Pulses in India"*

i) Name of Seed Hub Centre:

Name of Nodal Officer :	
Address :	
e-mail :	
Phone No. : Mobile :	

ii) Quality Seed Production Reports

Season	Crop	Variety	Production (q)

			Target	Area sown (ha)	Production	Category of Seed (F/S, C/S)
Kharif 2018						
Rabi 2018-19						
Summer/Spring 2019						

iii) Financial Progress

Fund received (2016-17, 2017-18 and 2018-19)	Expenditure (Rs. in lakhs)		Unspent balance (Rs. in lakhs)	Remarks
	Infrastructure	Revolving fund		
2016-17				
2017-18				
2018-19				

iv) Infrastructure Development

Item	Progress
Seed processing unit	
Seed storage structure	

3.6.

(A) Literature Developed/ Published (with full title, author & reference)

Item	Title	Authors' Names	Number	Circulation
Research paper	1. "Economic Evaluation of Front Line Demonstrations on Black Gram in Birbhum District of West Bengal", *Economic Affairs (Print ISSN No. 0424-2513 and Online ISSN No. 0976-4666), Vol. 63, No. 2*, June, 2018, pp. 521 – 525. 2. "Front line demonstration on lentil using improved varieties for increasing productivity under lateritic soil of West Bengal", *Legume Research (Print ISSN No. 0250-5371 and Online ISSN No. 0976-0571)*, Accepted for publication. 3. "Performance of Few New Different Paddy Varieties at Lateritic Soil of West Bengal, India", *International Journal of Science, Environment and Technology (Print ISSN No. 2277-663X and Online ISSN No. 2278-3687), Vol. 7, No. 5*, 2018, pp. 1592-1596.	Prabuddha Ray, subrata Mandal, Sourav Mondal and Palash Ankure Subrata Mandal, Prabuddha Ray, Sourav Mondal and Palash Ankure Subrata Mandal, Mrinmoy Karmakar and Sourav Mondal	**03 (Three)**	**-**
Seminar /conference / symposia papers	1. "A Study on the Front Line Demonstration of White Pekin Duck reared under Farm Condition in Birbhum District of West Bengal", Presented and Published at the National Seminar on Sustainable Resource Management for enhancing Farm Income, Nutritional Security and Livelihood Improvement, organized by	Madhuchhanda Khan, Krishna Mitra and Ruma Addy	**01 (One)**	-

	the Department of Agronomy, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum in collaboration with NABARD, Kolkata and in association with Indian Society of Agronomy – Sriniketan Chapter, Visva-Bharati at the Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, held from 01.02.2019 to 03.02.2019.			
Books	-	-	-	-
Bulletins	-	-	-	-
News letter	-	-	-	-
Popular Articles	-	-	-	-
Book Chapter	1. "Introduction of Giant Prawn (*Macrobrachium rosenbergii*) as A New Component of Composite Fish Culture in Birbhum District, West Bengal: A Successful Intervention by the Rathindra KVK, Birbhum", In: *Issues in Sustainable Development in India – Present Problems and Future Perspective [ISBN No. 978-93-86453-44-0]*, edited by Pranab Kumar Chattopadhyay and Daya Shankar Kushwaha, New Delhi Publishers, New Delhi, 2018, pp. 37 – 46. **2.** "Situation of Farm Machineries in Birbhum District, West Bengal- Gaps to be Filled Up", In: *Advance Technologies in Agriculture for Doubling Farmer's Income [ISBN No. 978-93-86453-61-7]*, edited by Kishore Chandra Swain, Ashis Kumar Chatterjee and P. Kandasamy, New Delhi Publishers, New Delhi, 2018, pp. 71 – 84. **3.** "Drum Seeder Performance in Front Line Demonstration Programmes", In: *Advance Technologies in Agriculture for Doubling Farmer's Income [ISBN No. 978-93-86453-61-7]*, edited by Kishore Chandra Swain, Ashis Kumar Chatterjee and P. Kandasamy, New Delhi Publishers, New Delhi, 2018, pp. 119 – 124. **4.** "Growth, Production and Reproductive Performance of Japanese Quails (*Coturnix coturnix japonica*) reared in Deep Litter System", In: *Advance Technologies in Agriculture for Doubling Farmer's Income [ISBN No. 978-93-86453-61-7]*, edited by Kishore Chandra Swain, Ashis Kumar Chatterjee and P. Kandasamy, New Delhi Publishers, New Delhi, 2018, pp. 303 – 308. **5.** "Fishery based Integrated Farming System (IFS)", In: *Issues in Sustainable Development – Gender and Agrarian Change [ISBN No. 978-81-937260-4-4]*, Pranab Kumar Chattopadhyay and Daya Shankar Kushwaha, Renu Publishers, New Delhi, Kolkata, 2018, pp. 85 – 95.	Prabuddha Ray, Sarthak Chowdhury and Krishna Mitra, Prabuddha Ray, Subrata Mandal, Sourav Mondal, Palash Ankure and Ganesh Das, Subrata Mandal, Prabuddha Ray, Sourav Mondal and Palash Ankure Madhuchhanda Khan, Shyamal K Mondal, K. Mitra, P. Ray and R. Addy Krishna Mitra, Madhuchhanda Khan, Subrata Mandal and Prabuddha Ray	**05 (Five)**	-
Extension Pamphlets/ literature	Booklet on "Banker Wrin Prakalpa" "Bank Loan Schemes" Booklet on "Sufal Bangla" Booklet on "Krishibhittick Samgrogulir Joney Eakti Swammanitwaya Bazaar – National Agriculture Market (E-NAM)" "An Integrated Market for Agricultural Produces– National Agriculture Market (E-NAM)"	Dr. Prabuddha Ray	**08 (Eight)**	**4000 (Four thousand)**

	Booklet on "Pradhan Mantri Fasal Bima Yojona – Krishi Abong Krishaker Swarthey Eakti Natun Padakshep" "Pradhan Mantri Fasal Bima Yojona – A New Initiative for the Interests of Farming and Farmers"			
	Booklet on "Ekangi Chash – Sashya Baichitrer Madhyomey Aay Briddhi" "Cultivation of Ekangi – Increasing Farmers' Income through Crop Diversification"	Dr. Subrata Mandal		
	Booklet on "Swanirvarater Lakshmey Banglar Kalo Chagal Palan" "Rearing of Black Bengal Goats for Self-Sufficiency"	Dr. Madhuchhanda Khan		
	Booklet on "Vetki Chash Paddhati" "Culture Practices of Vetki"	Dr. Krishna Mitra		
	Booklet on "Kom Kharachey Baritey Jaiba Keetnashak Prostuti Abong Taar Prayog Paddhati" "Preparation of Low Cost home Made Bio-Pesticides"	Sri Sourav Mondal		
Technical reports	1. Annual Progress Report (April, 2017 – March, 2018) of Rathindra KVK 2. Report on RFD, CCC and Skill Training (12 Reports for 12 Months) 3. Report on Achievement of Mandated Activities of Krishi Vigyan Kendras (12 Reports for 12 Months) 4. Report on the Activities under Swachha Bharat Mission (12 Reports for 12 Months) 5. Monthly Reports of RKVK (12 Reports for 12 Months) 6. Report to PMO on Activities of RKVK (12 Reports for 12 Months) 7. Yield Report on CFLD on Oilseed of Rabi Season in 2017-18 8. Yield Report on CFLD on Pulses of Rabi Season in 2017-18 9. Success Story of CFLD Pulses in 2017-18 10. Information on DAESI Programme 11. Yield Report on CFLD on Pulses of Rabi and Summer Season in 2017-18 12. Farmers' Database regarding Digital Farming Initiatives 13. Report on Green Fodder Cultivation Popularization Efforts through FLDs 14. Report on Webcasting of Interaction of PM with Farmers on 20.06.2018 by RKVK 15. Report on Swacchata Hi Seva – 2018 16. Status Report of CFLD Pulses in 2018-19 17. Full Report of CFLD Pulses in 2017-18, RKVK 18. Action Plan for Doubling Farmers' Income at KVK level by RKVK 19. Farmer-wise Yield Report of CFLD Oilseed, Rabi and	Rathindra KVK	**94 (Ninety Four)**	Among all the concerned.

	Summer, 2017-18 20. Physical Progress Report of CFLD Pulse 21. Report of Inauguration of Krishi Kalyan Abhiyan – II 22. Achievement under CFLD Pulses in Kharif in 2018-19 23. Report on Summer Oilseed (Sesame) in 2017-18 24. Report on RTI Application regarding Soil and Water Testing Laboratory 25. Success Story on Kharif Sesame in 2018 26. Report on World Soil Day – 2018 27. Information on Neem Coated Urea 28. Yield Report of CFLD Pulse in 2018-19 29. Yield Report of CFLD Oilseeds in 2018-19 30. Status of Rabi Pulses and Oilseeds in 2018-19 31. Report on Status of ASCI Skill Training by Rathindra KVK 32. Community Radio Service Information 33. Report on Impactful Technologies received from NARS of India and implemented by Rathindra KVK 34. Farmer-wise Yield Report of CFLD Oilseeds in Kharif, 2018 35. Success Story of Kharif Sesame in 2018 36. Information on Webcast of Inauguration of Pradhan Mantri Kisan Samman Nidhi Scheme 37. Report on area covered under CFLD Pulses 38. Action Plan on CFLD Oilseeds in 2019-20 39. Yield Report of CFLD Rabi Pulses in 2018-19			
TOTAL			**111 (One Hundred Eleven)**	

(B) Details of HRD programmes undergone by KVK personnel:

Sl. No.	Name of Programme	Name of course	Name of KVK Personnel and Designation	Date and Duration	Organized by
01.	Zonal Workshop of Krishi Vigyan Kendras of West Bengal, Odisha and Andaman and Nicobar Islands	Zonal Workshop of Krishi Vigyan Kendras of West Bengal, Odisha and Andaman and Nicobar Islands	Smt. Ruma Addy, Programme Coordinator (Officiating) and Subject Matter Specialist (Home Science)	26.05.2018 to 27.05.2018 (02 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097 at Orissa University of

					Agriculture and Technology (OUAT), Bhubaneswar – 751003, Odisha.
02.	Zonal Workshop of Krishi Vigyan Kendras of West Bengal, Odisha and Andaman and Nicobar Islands	Zonal Workshop of Krishi Vigyan Kendras of West Bengal, Odisha and Andaman and Nicobar Islands	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	26.05.2018 to 27.05.2018 (02 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097 at Orissa University of Agriculture and Technology (OUAT), Bhubaneswar – 751003, Odisha.
03.	"Write-Workshop on Preparation of Study Material of Diploma in Agricultural Extension Services for Input Dealers (DAESI) Course"	"Write-Workshop on Preparation of Study Material of Diploma in Agricultural Extension Services for Input Dealers (DAESI) Course"	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	25.06.2018 to 28.06.2018 (04 Days)	State Agricultural Management and Extension Training Institute (SAMETI) and Agricultural Training Centre (ATC), Ramakrishna Mission Ashrama, Narendrapur, Kolkata – 700103 at the SAMETI Campus, Narendrapur, Kolkata
04.	"Write-Workshop on Preparation of Study Material of Diploma in Agricultural Extension Services for Input Dealers (DAESI) Course"	"Write-Workshop on Preparation of Study Material of Diploma in Agricultural Extension Services for Input Dealers (DAESI) Course"	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	25.06.2018 to 28.06.2018 (04 Days)	State Agricultural Management and Extension Training Institute (SAMETI) and Agricultural Training Centre (ATC), Ramakrishna Mission Ashrama, Narendrapur, Kolkata – 700103 at the SAMETI Campus, Narendrapur, Kolkata
05.	Training for KVK Sandesh under Digital Farming Initiative in Agriculture	Training for KVK Sandesh under Digital Farming Initiative in Agriculture	Sri Suraj Kumar Bhakta, Programme Assistant (Computer Programmer)	07.08.2018 (01 Day)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097 at Krishi Vigyan Kendra, Kalyan, Purulia, West Bengal
06.	Workshop on DAMU Project	Workshop on DAMU Project	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	08.08.2018 to 10.08.2018 (03 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097
07.	Premium 21 Days ICAR Sponsored Centre of Advanced Faculty Training (CAFT) on "Extension led Nutritional Security"	Premium 21 Days ICAR Sponsored Centre of Advanced Faculty Training (CAFT) on "Extension led Nutritional	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	04.09.2018 to 24.09.2018 (21 Days)	Division of Agricultural Extension, ICAR – Indian Agricultural Research Institute (IARI), Pusa, New Delhi – 110012

		Security"			
08.	Train the Trainer (ToT) Training Programme on the Job Role "Hatchery Production Worker" (AGR/Q 4901) of the Agriculture Skill Council of India (ASCI) Skill Training	Train the Trainer (ToT) Training Programme on the Job Role "Hatchery Production Worker" (AGR/Q 4901) of the Agriculture Skill Council of India (ASCI) Skill Training	Dr. Krishna Mitra, Subject Matter Specialist (Fishery)	18.09.2018 to 21.09.2018 (04 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097 at the Bidhan Chandra Krishi Viswavidyalaya (BCKV), Lake Hall, Kalyani, Nadia, West Bengal
09.	Orientation Course on IPM in Important Crops of West Bengal, Odisha and Andaman and Nicobar Islands	Orientation Course on IPM in Important Crops of West Bengal, Odisha and Andaman and Nicobar Islands	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	13.12.2018 to 15.12.2018 (03 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097
10.	Orientation Course on IPM in Important Crops of West Bengal, Odisha and Andaman and Nicobar Islands	Orientation Course on IPM in Important Crops of West Bengal, Odisha and Andaman and Nicobar Islands	Sri Palash Ankure, Programme Assistant (Farm Manager)	13.12.2018 to 15.12.2018 (03 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097
11.	Training Programme on "On-farm Water Management Technologies for Improving Water Productivity"	Training Programme on "On-farm Water Management Technologies for Improving Water Productivity"	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	21.01.2019 to 24.01.2019 (04 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097 at the ICAR – Indian Institute of Water Management (IIWM), Bhubaneswar, Odisha, India
12.	National Seminar on Sustainable Resource Management for enhancing Farm Income, Nutritional Security and Livelihood Improvement	National Seminar on Sustainable Resource Management for enhancing Farm Income, Nutritional Security and Livelihood Improvement	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	01.02.2019 to 03.02.2019 (03 Days)	Department of Agronomy, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum in collaboration with NABARD, Kolkata and in association with Indian Society of Agronomy – Sriniketan Chapter, Visva-Bharati at the Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum
13.	Regional Level Workshop on PPV&FRA	Regional Level Workshop on PPV&FRA	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	15.03.2019 (01 Day)	PPV&FR Authority, Ministry of Agriculture and Farmers' Welfare, Govt. of India, New Delhi and ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block

					GB, Sector – III, Salt Lake City, Kolkata –700097 at the West Bengal University of Animal and Fishery Sciences, Khsudiram Bose Sarani, Belgachia, Kolkata.

3.7. Success stories/Case studies, if any (two or three pages write-up on 1-2 best case(s) with suitable action photographs)

Sri Tapan Kumar Ghosh, a successful Back Yard Poultry Farmer partnered by the Rathindra Krishi Vigyan Kendra

Name of farmer - Sri Tapan Kumar Ghosh

Address - Village – Bishnubati, C. D. Block – Bolpur - Sriniketan, P. O. – Sattore, P. S. – Sattore, Dist. – Birbhum, Pin. – 731236, West Bengal

Contact details (Phone, mobile, email Id) – Mobile Phone No. - 9614057093

Land holding (in ha.) –1.33

Name and description of the farm / enterprise – Backyard poultry farming is one of the most important viable non-crop enterprises of dry semi-arid zone of West Bengal. However, the traditional way of backyard poultry keeping system is less remunerative as a consequence of scarcity of superior germplasm. Though, rural backyard poultry segment contributes nearly 30 per cent of the national egg production, still it is a neglected one. The meat of backyard scavenging chickens is highly accepted in the markets and more remunerative than commercial broiler meat because of its taste, lower fat content and texture.

Keeping these real level situations in mind, the Rathindra Krishi Vigyan Kendra has intervened through conducting an On Farm Trial Programme on Comparative Performance analysis of the Breeds viz. Vanaraja, Rhode Island Red and Indigenous (Deshi) Chicken in dryland farming situation of Birbhum District of West Bengal.At first, in the financial years of 2014-15 and 2015-16,the Rathindra Krishi Vigyan Kendra selected fourteen partner farmers from different villages of Birbhum district for the On Farm trial Programmes.

One of the selected partner farmers, Sri Tapan Ghosh, who was continuing the Back Yard Poultry Farming in a traditional way, but earning a Net Profit Margin almost each and every year, was keenly observed by the Rathindra KVK focusing on the potential of increasing the profit gained by the above mentioned unemployed partner farmer, i.e. Sri Tapan Kumar Ghosh. Sri Ghosh was selected for the On Farm Trial Programme on comparative analysis of the performances of the different types of rural poultry breeds under Back Yard Farming situation. Before inducting Sri Ghosh in the On Farm trial programme, Sri Ghosh was given intensive skill development training programmes on scientific poultry farming and management practices and low cost feed formulation of poultry from Rathindra KVK, Visva-Bharati, West Bengal. He also attended a lot of various awareness programmes and exposure visits to public as well as private sector poultry farms for gaining first hand experiences.

Rathindra KVK distributed 20 numbers of Vanaraja, 20 numbers of Rhode Island Red and 20 numbers of Indigenous (Deshi) chicken breeds to Sri Tapan Ghosh as critical input of the On Farm Trial Programme after twenty one days of brooding

programme organized and performed in the Instructional Poultry Farm of the KVK. He started his backyard poultry unit at his own land and constructed a non-conventional low-cost poultry house made of locally available materials, such as bamboo and wood as night shelter and to protect the birds from predators. Birds were let loose as free range scavenging for utilizing the feed base, i.e., fallen grain, insect, earthworm, kitchen waste, green grass etc. with supplementary feeding of concentrate mixture prepared by the locally available feed resources. Almost one fourth of the amount of concentrate mixture was replaced by *Azolla* (*Azolla pinnata*) and vegetables like *Kalmi* (*Ipomoea aquatica*) and Spinach (*Spinacia oleracea*) etc. De-worming and vaccination of birds were done by Mr.Tapan Kumar Ghosh as per the standard protocol with technological backstopping by the scientist of the Rathindra KVK.

Bodyweight of the Vanaraja Breed at 52 weeks of age for male was about 3.7 Kg while for female it was about 2.5 Kg and in case of Rhode Island Red the bodyweight of male was about 2.95 Kg and 2.3 Kg for female. Vanaraja produces 103-110 eggs and Rhode Island Red produces 150-160 eggs and age of first egg laying of these two breeds is almost similar i.e.175-180 days. Mortality upto 52 weeks of age for Vanaraja and Rhode Island Red is also negligible. By the time, Sri Tapan Kumar Ghosh started to brood fertile eggs of both Vanaraja and Rhode Island Red by using his local hen; this has initiated breed up-gradation of his chicken breeds.

Vanaraja and Rhode Island Red bird fetches a market price of Rs.180.00 – Rs. 200.00 /kg. which is similar with local poultry price in market. The price of newly hatched chick is around Rs. 22.00 to Rs.25.00 per chick and table purpose egg fetches a price of Rs. 6.00 to Rs. 7.00 per egg. Besides, Sri Ghosh diversified his Back Yard Poultry Farming into a breed up-gradation sector also by crossing these two breeds viz. Vanaraja and Rhode Island Red with local birds.

This success of Sri Ghosh can be used as a Model for formulating the Strategies to double the incomes of the farmers of the Birbhum District, West Bengal within 2022.

Economic impact – The economics of the activities of Sri Tapan Kumar Ghosh are given in the following Section.

Economics of the Enterprise:

Performance of Different Breed of Poultry Birds under Back yard Farming System practiced by Sri Tapan Ghosh

Technology option	Body weight						Age at first egg (day)	Egg production up to 72 week	Egg weight at 26 th week (gm)	Egg weight at 40 th week (gm)	Cost of cultivation (Rs./unit i.e. 20 nos)	Gross return (Rs./unit i.e. 20 nos)	Net Return (Rs /unit i.e 20 nos)	B:C Ratio
	At 6th. Week (gm)		At 40th Week (gm)		At 52nd Week (gm)									
	M	F	M	F	M	F								
Farmer's (Sri Tapan Ghosh's) practice: Indigenous (Deshi) Poultry bird	247.21±4.49	365.12±5.86	785.27±6.69	1234.5±2±8.37	916.85±7.74	1478.3±2±9.91	202.64±1.24	65.73±0.71	31.85±0.18	36.52±0.13	8541	10079	1538	1.18
I. Rhode Island Red (RIR)	551.17±4.17	437.81±3.23	1768.39±12.35	2349.2±4±14.75	2941.43±17.82	2298.1±4±12.57	184.58±0.92	157.23±1.10	47.35±0.24	53.09±0.26	12675	21168	8493	1.67

II. Vanaraja	519.32±4.54	636.32±3.38	2976.61±18.08	2352±12.66	2487.01±16.73	3691.87±20.84	186.32±1.08	103.28±1.04	42.32±0.21	48.92±0.23	15244	19665	4421	1.29

$P < 0.05$

Result: The data from the Table- 1 indicated that the Technology Option - I i.e. Improved Rural Poultry Bird Rhode Island Red (RIR) significantly produced better B:C ratio at 72nd week (1.67), than those of Technology Option-II (Breed Vanaraja) and Farmer's practice [Breed Indigenous (Deshi)]. Technology Option - II i.e. Improved Poultry Bird Vanaraja produced better B:C ratio at 72nd Week (1.29) than farmer's practice (Deshi).

Profit and Loss: Sri Tapan Ghosh has got a net profit of Rs.38,000.00 (Rupees Thirty eight thousands) by selling ready bird, table egg and newly hatched chicks from each unit and each batch.

Social Impact: Back Yard Poultry Farming is a Primary Source of Animal Protein and supplementary income generation for the downtrodden and marginalized rural population. Women and marginal farmers who sale Birds have opportunities to network and may have increased social standing. Income from sales of poultry products help the farmers with money for their daughters' weddings, meet their day-to-day necessities, expenditure for children's education, repair and renovation of house. Traders of Poultry and eggs also have increased social standing as well as economic place in the society. They travel by bi-cycle about 20 – 30 kilometres per day and carry information between villages which help to spread messages.

Environmental Impact: Commercial Poultry facilities are major sources of Green House Gases viz. Carbon-Di-Oxide, Nitrous Oxide etc. Odour and flies are two important nuisances to carry disease. Odour emission caused by a large numbers of contributing compounds including Ammonia, Hydrogen sulphides etc. from Poultry farms adversely affect the life of people living in the vicinity.

On the contrary, environmental impacts related to Back Yard Systems are marginal, because of the limited concentration of waste and reliance on locally available sources of feed such as food residue, crop residue etc.

Horizontal / Vertical spread: 100 numbers of practicing farm women from disadvantageous and marginalized Scheduled Tribe (ST) community who were members of 10 Self Help Groups (SHGs) of the nearby three villages namely, Assadulahapur, Adibasipara and Bautizole of Bolpur – Sriniketan Community Development Block of Birbhum District adopted the Back Yard Poultry Farming System as practiced by Sri Tapan Kumar Ghosh.

Remarks: Mr. Tapan Kumar Ghosh, an unemployed rural youth, paved the way for other unemployed youths as well as farmers and farm women to take up poultry rearing of improved breeds like Vanaraja and Rhode Island Red as a viable rural entrepreneurship to generate low input and high output venture for sustainable livelihood development which can be achieved within a very short period of time.

Sri Tapan Kumar Ghosh amidst "Rhode Island Red (RIR)" Poultry Breeds along with Rathindra KVK Scientist in the On Farm Trials on "Evaluation of Rural Breeds Poultry Breeds in the Back Yard Farming System" organized by the Rathindra KVK, Birbhum

Sri Tapan Kumar Ghosh with "Vanaraja" Poultry Breeds in the On Farm Trials on "Evaluation of Rural Breeds Poultry Breeds in the Back Yard Farming System" organized by the Rathindra KVK, Birbhum

3.8. Give details of innovative methodology or innovative technology of Transfer of Technology developed and used during the year

Sl. No.	Name / Title of the innovative methodology or innovative technology of Transfer of Technology	Name / Details of the Innovator(s)	Brief details of the innovative methodology or innovative technology of Transfer of Technology (Innovative Technology)
01.	The Rathindra KVK acting as a Technology Demonstration Centre	Rathindra KVK	This can overcome the problems, faced by developing countries, especially the LDCs, of demonstrating technology utilization potential and promoting overall technology awareness. Science and technology exhibitions, both stationary and mobile, and school and mass media programmes are being undertaken by this KVK and these exhibitions (especially through organizing programmes on Cluster Front Line Demonstrations on Rabi Pulses and Oilseeds, International Soil Day, Soil Health Card preparation, Pre-Rabi Kisan Campaign, Krishi Kalyan Abhiyan, District Kisan Mela, Pre-Rabi Kisan Sammelan, Jai Kisan Jai Vigyan Diwas, Sankalp Se Siddhi – New India Manthan – for taking Pledge to double the farmers' Income, Mahila Kishan Diva Awareness Camps in Rural Schools, celebration of Technology Week etc.) are necessary if the cultural aspects of technology transfer and development are to be addressed.
02.	The Rathindra KVK's Role in Information development	Rathindra KVK	The role of information in technology transfer and development is crucial, and therefore capacities are needed to ensure access to the information required for adequate technological capability. There is much information in the public domain that is useful for technology transfer and development. However, the information needed should go beyond simple inventories of costs and environmental parameters, and should include specific technical data that will facilitate technology selection, development and use. Keeping these factors in mind, the Rathindra KVK is developing Technological Modules in the forms of Extension Literatures like Booklets, Leaflets, Folders, Brochures, CDs, DVDs etc. using the information generated from its past rearch and extension activities as well as information generated from both the ICAR and SAU or CU Systems to meeting the information gaps prevalent among the practicing farmers, farm women, rural youths and extension functionaries of the district of Birbhum. This KVK also focuses on (a) information assessment and screening, (b)maximal use of electronic systems and (c) the development of relevant databases in Agriculture and related sectors.
03.	The Rathindra KVK's Role in Technology partnerships and networking	Rathindra KVK	Technology partnerships between the Rathindra KVK and reputed Governmental Organizations (GOs) and Non-Governmental Organizations (NGOs) have been very effective in technology development and transfer and market development, provided they are two-way relationships involving a long-term commitment with the

objective of sharing knowledge, enhancing technological capabilities, fostering innovation and strengthening competitiveness. Interaction and mutual dependency, as well as risk and cost sharing among partners, are important. The Rathindra KVK and its associated Networks consist of a group of institutions or associations with the aims of enhancing the capacity to conduct research and improving training and education through interaction. The Rathindra KVK thus forms a network to improve access to new ideas, methods, and information sharing and materials exchange. Both technology partnerships and networking require a certain level of technical competence among partners. There are many such partnerships and networks among this KVK, reputed GOs and reputed NGOs and these activities are growing. This recent initiative shows that these partnerships and networks can foster technological upgrading and improvement and quicker and more efficient Extension activities at a much lower cost to each of the partners thus creating a Win-Win situation for all the partners.

3.9. a. Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)

Sl. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
01.	Broiler Farming	Green Betel leaves are crushed and mixed with Juggery at the rate of 4 (Four) Numbers of Crushed Betel leaves and 15.00 Grams of Juggery per 100 Birds.	For treatment of Gout and Kidney dis-order in Broiler.

Sri Aurobindo Ghosh of Village - Balta, P. O. – Batikar, C. D. Block – Illumbazar, Dist. – Birbhum with Betel Leaf to be crushed in Mixer-Grinder Machine for Treatment of Gout and Kidney Disorder of his Broiler Birds

Sri Aurobindo Ghosh of Village - Balta, P. O. – Batikar, C. D. Block – Illumbazar, Dist. – Birbhum mixing the Juice of the Betel Leaf crushed in Mixer-Grinder Machine with Juggery in the Drinker for Treatment of Gout and Kidney Disorder of his Broiler Birds

Sri Aurobindo Ghosh of Village - Balta, P. O. – Batikar, C. D. Block – Illumbazar, Dist. – Birbhum giving the mixture of the Juice of the Betel Leaf crushed in Mixer-Grinder Machine with Juggery through the Drinker to the Broiler Birds for Treatment of Gout and Kidney Disorder of the Broiler Birds

b. Give details of organic farming practiced by the farmer

Sl. No.	Crop / Enterprise	Area (ha) / No. covered	Production	No. of farmers involved	Market available (Y/N)
01.	Production of Seasonal Vegetables without using chemical inputs	16 ha	2400 q of Seasonal Vegetables / Week in a harvesting season (Minimum 2 harvesting Seasons in a Year)	600	Yes

3.10. Indicate the specific training need analysis tools/methodology followed by KVKs

Sl. No.	Brief details of the tool / methodology followed	Purpose for which the tool was followed
01.	Rathindra KVK family coordinates the work of all scientists for smooth functioning of the KVK as well as for the benefit of the rural people of that particular area. Programme Co-ordinator is liaisoning with other line departments for coordination and effective implementation of different programs of the KVK in the adopted village. Rathindra KVK tried to adopt a Cluster of 4 to 6 economically, culturally and technologically backward villages situated within 10-20 Kms radius of the KVK. These villages are not too small or too large. Before adoption a detailed survey of the village was conducted to study the socio-economic and cultural status of that village. Now-a-days Participatory Rural Appraisal (PRA) tool was used to conduct the survey in which the village people are actively participated in the process. The village map was drawn by the help of different colour by the villagers themselves and different prominent structures of the village such as school, temple, river, club etc. were depicted in that map. These structures will help the scientists to conduct the survey easily and smoothly. Basing upon the survey the field crop maps, animal resource map and other ancillary maps were prepared for future use. After the survey work detailed plan of work was chalked out and depending upon the requirement different activities was undertaken in different areas by the Rathindra KVK scientists.	Training Need Assessment of Rathindra KVK Clientele viz. Practicing Farmers and Farm Women
02.	Rathindra KVK assesses the needs of the Rural Youth mainly through Participatory Tools like Resource map, Transact map, Employment Opportunity Analysis, Job Availability Matrix, Job Choice Matrix, Un-Employment Problem Cause Diagram etc. and also administering them a Structured Question Schedule regarding the needs of the Rural Youth prepared by the Rathindra KVK in consultation with other experts of ICAR and Visva-Bharati.	Training Need Assessment of Rathindra KVK Clientele viz. Rural Youths
03.	Rathindra KVK assesses the need of the Extension Functionaries mainly through questioning the respective clientele about their needs and their job needs and the needs of their sponsoring agencies. Here mainly PRA tools like problem – cause diagram, Resource map, Organizational Diagram, Job Analysis, Job Satisfaction Matrix etc. are used.	Training Need Assessment of Rathindra KVK Clientele viz. Extension Functionaries

3.11. a. Details of equipment available in Soil and Water Testing Laboratory

Sl. No	Name of the Equipment	Qty.
1.	Mixer grinder Kenstar	2 nos.
2.	Refrigerator Whirlpool	2 nos.
3.	Stabilizer Fizi	2 nos.
4.	Shaker	1 no
5.	Oven	1 no

6.	Kelplus Elect Digestation System Model KES 08L	1 no
7.	Kelplus Elect Distillation System Elite Ex	1 no
8.	Systronics Micro controller based visible Spectrophotometer	2 nos.
9.	Systronics P-H system	2 nos.
10.	Systronics Digital Conductivity Meter	2 nos.
11.	Systronics Flame Photometer Type 128	2 nos.
12.	Hotplate with energy regulator	1 no.
13.	Glass Distillation apparatus flux	3 nos.
14.	Physical Balance Cap.250g with weight box	4 nos.
15.	Shimadzu Electronic Balance	2 nos.
16.	Kjeldal digestion unit	2 nos.
17.	Kjeldal distillation unit	2 nos.
18.	MridhhaParikshak (Digital Mini-Lab Solar Powered)	2 nos.
Total		**34 nos.**

3.11.b. Details of samples analyzed so far :

Number of soil samples analyzed			**No. of Farmers**	**No. of Villages**	**Amount realized (in Rs.)**
Through mini soil testing kit/labs	**Through soil testing laboratory**	**Total**			
66	31	97	97	24	Soil samples were analyzed for routine analysis for conducting FLD/OFT programmes. 52 numbers of Universal Soil Health Cards were prepared and distributed among the farmers free of cost on World Soil Day – 2018 on 05.12.2018.

3.11.c. Details on World Soil Day

Sl. No.	**Activity**	**No. of Participants**	**No. of VIPs**	**Name (s) of VIP(s)**	**Number of Soil Health Cards distributed**	**No. of farmers benefitted**
01.	1. Soil Health Card Distribution. 2. Publication of Various Extension Literature on different aspects of Soil Health Management. 3. Lectures by Eminent Professors of Soil Science on the issues related with Soil Health and its Management. 4. Training for Practicing Farmers and Farm Women on maintenance of Soil Health and related topics. 5. Distribution of Extension Literature among the participants on various aspects of Soil Health Management. 6. Total Nos. of Practicing Farmers and Farm Women present: - 61 7. Total Nos. of persons attended the Programme: - 75	75	01	Prof. Asish Kumar Chatterjee, Eminent Professor of Soil Science and Principal, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum – 731236, West Bengal	52	52

3.12. Activities of rain water harvesting structure and micro irrigation system

No of training programme	No of demonstrations	No of plant material produced	Visit by the farmers	Visit by the

				officials

3.13. Technology week celebration

Type of activities	No. of activities	Number of participants	Related crop/livestock technology

3.14. RAWE / FET programme - is KVK involved? (Y/N) Yes

In the RAWE Programme of the B. Sc. (Ag.) Honours Course of Palli-Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, the Rathindra KVK is involved for giving the students an exposure on the concept, activities and effects of the Krishi Vigyan Kendra as a Centre of research and extension activities.

No. of students trained	No. of days stayed
51	As the students either stays in Visva-Bharati Hostel or are Day-Scholars, so no students stay in the Trainees' Hostel of the Rathindra KVK.

ARS trainees trained	No. of days stayed
-	-

3.15. List of VIP visitors (Minister / MP / MLA / DM / VC / Zila Sabhadipati / Other Head of Organization / Foreigners)

Date	Name of the Person	Purpose of Visit
18.08.2018.	Mr. Meaoja Sri Ranjan, Teacher, Hillwood College, Kandy, Sri Lanka	To know about the nitty-gritty of the modus operandi of the Rathindra KVK as well as the uniqueness of the concept of the Krishi Vigyan Kendras as a whole.
16.09.2018.	Sri Chhabilendra Roul, Special Secretary, DARE and Secretary, ICAR, New Delhi	To know about the procedures of research, demonstration and extension of agricultural and related field technologies adopted by the Rathindra KVK
12.10.2018.	Dr. S. Roy Chowdhury, Head and Soil Survey Officer, SLUSI, Kolkata Centre, B – P Township, Kolkata	To know about the nitty-gritty of the modus operandi of the Rathindra KVK as well as the uniqueness of the concept of the Krishi Vigyan Kendras as a whole and to know about the procedures of research, demonstration and extension of agricultural and related field technologies adopted by the Rathindra KVK

4. IMPACT

4.1. Impact of KVK activities (Not to be restricted for reporting period).

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Seed Production of Paddy	70	85.72	Rs. 67,080.00 per ha	Rs. 1,03,200.00 per ha
Seed Production of Pulses	230	52.18	Rs.31,600.00 per ha	Rs.66,500.00 per ha
Varietal Replacement of Mustard with Improved Mustard Variety RW – 351	170	88.24	Rs. 23,520.00 per ha	Rs. 73,800.00 per ha
Improved Method of Elephant's Foot Yam Cultivation	207	89.00	Rs. 2,36,250.00 per ha	Rs. 14,17,500.00 per ha
Low Cost Fish Feed Preparation	51	49.02	Rs. 20,000.00 per Year	Rs. 96,000.00 per Year
Kantha Stitch Work	71	56.34	Nil	Rs. 12,000.00 to Rs. 36,000.00 per Year
Preparation and Use of Vermin-	290	62.07	Nil	Rs. 19,000.00 per 2.5 ft

Composting				X 2.0 ft X 3.0 ft area /year

4.2. Cases of large scale adoption
(Please furnish detailed information for each case)

Horizontal Spread of Technologies	
Technology	**Horizontal spread**
Seed Production of Paddy	60 farmers Trained in the Rathindra KVK on various aspects of Paddy Seed Production adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 120 numbers of farmers of whom 32 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 40 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 24 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 24 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
Seed Production of Pulses	120 farmers Trained in the Rathindra KVK on various aspects of Pulse Seed Production adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 70 numbers of farmers of whom 19 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 23 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 14 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 14 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
Varietal Replacement of Mustard with Improved Mustard Variety RW – 351	150 farmers Trained in the Rathindra KVK on various aspects of Cultivation of Improved Mustard Variety RW – 351 adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 100 numbers of farmers of whom 27 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 34 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 20 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 19 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
Improved Method of Elephant's Foot Yam Cultivation	185 farmers Trained in the Rathindra KVK as well as 110 of them were involved in the FLD Programmes of Rathindra KVK on various aspects of improved method of Elephant's Foot Yam Cultivation adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 118 numbers of farmers of whom 31 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 39 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 24 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and 20 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK. **It was necessary to mention here that 4 numbers of farmers of the neighbouring Dumka District of the Jharkhand State also adopted the above mention Technology through the horizontal spread of the Technology.**
Low Cost Fish Feed Preparation	25 farmers Trained as well as getting involved in the FLD Programmes of the Rathindra KVK on various aspects of low cost fish feed preparation adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 12 numbers of farmers of whom 03 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 04 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 02 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 03 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
Replacement of Deshi Poultry Breed by Rhode Island Red Breed (RIR)	309 farmers Trained as well as getting involved in the FLD Programmes of the Rathindra KVK on various aspects of replacement of local Deshi Poultry Breed by introduction of High Yielding Poultry Breed viz. Rhode Island Red (RIR) adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 512 numbers of farmers of whom 302 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 109 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 23 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 78 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
Kantha Stitch Work	40 farm women and female rural youths Trained in the Rathindra KVK on various aspects of Kantha Stitch Work adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 25 numbers of farm women and female rural youths of whom 07 numbers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 08 numbers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 05 numbers of farm women and female rural youths resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 05 numbers of the farm women and female rural youths resided within 15.1 kms and above radius of the Rathindra KVK.
Preparation and Use of Vermin-	180 farmers Trained in the Rathindra KVK on various aspects of preparation and use of Vermin-Composting adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 110 numbers of farmers of whom 29 numbers of farmers resided within

Composting	0.1 – 5 kms. Radius of the Rathindra KVK; 37 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 22 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 22 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.

4.3. Details of impact analysis of KVK activities carried out during the reporting period

Sl. No.	Brief details of technology	Impact of the technology in subjective terms			Impact of the technology in objective terms	
		Productivity / Yield		Numbers of Farmers adopted the Technology	Change in Income due to Activities of KVK	
		Before Adoption of new technology	After Adoption of new technology		Before Adoption of new technology	After Adoption of new technology
01.	Improved Poultry Breed Rhode Island Red (RIR)	No. of Eggs / Bird / Year 155.30 Average Body Weight of Male – 2.08 kg. Average Body Weight of Female – 1.53 kg.	No. of Eggs / Bird / Year 163.20 Average Body Weight of Male – 2.43 kg. Average Body Weight of Female – 1.68 kg.	65	Rs. 6,853.00 per Household from 20 Birds Capacity reared in Back Yard condition	Rs. 11,750.00 per Household from 20 Birds Capacity reared in Back Yard condition
02.	Area Specific Mineral Mixture for Lactating Dairy Cow	Milk Yield – 18.46 kg. / wk. / Cow	Milk Yield – 23.88 kg. / wk. / Cow	76	Rs. 10,218.00 / Year / Cow	Rs. 14,737.00 / Year / Cow

4.4. Details of innovations recorded by the KVK

Thematic area	Poultry Production
Name of the Innovation	Handmade Low Cost Manual Incubator
Details of Innovator	Sri Ershad Molla, Village + P. O. – Sattore, Pin. – 731236, Dist. – Birbhum.
Back ground of innovation	Sri Ershad Molla has got the idea of a Low Cost Manual Incubator for Poultry egg hatching through technical inputs and knowledge and skill acquired from the Scientist Rathindra KVK in the year 2017-18 and he proceeded to build up that incubator in the same year at a total expenditure of Rs. 35,000.00 (Rupees Thirty Five thousands) and started egg hatching in 2018-19.
Technology details	Hand-made incubator (operated by both Main Line Electric and Inverter current) of 700 egg hatching capacity with around 8 cycles in a year.
Practical utility of innovation	(a) According to the needs of the villagers, he operates the Incubator and achieves up to 8 cycles per years. (b) The farmers get the opportunity to procure Chicks or Ducklings of RIR, Deshi Duck and Khaki Campbells as per their own needs at the door step at reasonable price. (c) Sri Ershad Molla earns around Rs. 10,000.00 (Rupees Ten Thousands) per month with 700 egg hatching capacity of the incubator. (d) Normally Sri Molla buys egg for hatching at the rate of Rs. 12 per egg from the State Govt. Poultry Farm of West Bengal and also from the Rathindra KVK trained farmers of Birbhum District and sells at the rate Rs. 30 per Chick or Duckling

Sri Ershad Molla, Village + P. O. – Sattore, C. D. Block – Bolpur – Sriniketan, Pin. – 731236, Dist. – Birbhum along with his Innovative Handmade Low Cost Manual Incubator

4.5. Details of entrepreneurship development

Entrepreneurship development	
Name of the enterprise	**Dairy of Sri Debasish Mandal**
Name & complete address of the entrepreneur	Village: - Surul, P. O. – Sriniketan, Pin. – 731236, Dist. – Birbhum, West Bengal. Mobile Phone No. – 7001358872
Role of KVK with quantitative data support:	Crossbreeding and Breed up-gradation through Artificial Insemination (A. I.). is the most suitable and economical technique for generating higher genetic and production potential. Crossbreeding in indigenous low producing cattle with superior germplasm influences the genetic potential of the crossbred so born. The age at puberty have been attended at 2 to 2.5 years of age. All the female calves fed properly from the beginning of the birth so that they attain desired body weight and maturity at an early age. The traditional feeding practice is modified by providing mineral mixture, concentrate and green forages and formulation of low cost feed. After parturition animals usually always come to heat up to 2- 2 1/2 months. Sri Mandal tried hard so that no heat might be missed and insemination is being given by trained person and timely to achieve optimum pregnancy result. Post insemination confirmation of pregnancy at 60 days. Sri Debasish Mandal got educated and trained in modern profitable animal husbandry practices, especially feeding, management and care of growing calves and heifers by Rathindra Krishi Vigyan Kendra. Poor quality of germplasm, poor nutrition and management and to some extent lack of proper animal husbandry practices and traditional misconception play an important role in less reproductive efficiency of cattle in rural area. Generally the traditional dairy farmers are not much aware about the time when their animal should reach puberty and the young growing animals don't get proper attention and are raised on dry fodder and grazing. Thus the age at

	puberty is attended as late as 4, 5 or 6 years. In this way livestock owner misses at least one crop or two-calf crop in their lifetime. Keeping this scenario in mind, the Technological Back-stopping from the Rathindra Krishi Vigyan Kendra regarding the adoption of A. I., formulation of low cost feed, supplementation with mineral mixture and cultivation of fodder crops helped Sri Mandal a lot to make profit from his small scale dairy Unit. The Rathindra Krishi Vigyan Kendra has provided Sri Debasish Mandal detailed Knowledge and Skill Development Training on • Artificial Insemination (A. I.) in cattle • Conscientious heat detection • Proper timing of insemination • Low cost feed formulation • Feeding, management and care of growing calves and heifers • Cultivation and feeding of green fodder Feeding of area specific mineral mixture.
Timeline of the entrepreneurship development	Before the Rathindra KVK Intervention, Sri Debasish Mandal who owned 1 hectare of land was engaged in cultivation of Kharif Paddy and Potato in Rabi Season which gave him a net monthly income of Rs. 2,500.00 (Rupees Two Thousands Five Hundreds) only. Before the Rathindra KVK intervention, he has started a Small scale Dairy Unit with Two Cross Breed Cows which give him an average Milk Production of 6 – 7 litres per cow per day. Sri Mandal's Traditional Dairy Farming was based on Feeds like Mustard Cake, Broken Rice, Hay and Straws without any presence of Green Fodder, Mineral Mixture, Concentrate Feeds in the diets of the Cows. He earned a Net Income of Rs. 4,600.00 (Rupees Four Thousands Six Hundreds) only per Year from his Traditional Dairy Unit with a B: C Ratio of 1.27. **The Present Situation: - A. Agricultural Activities: -** Cultivation of Paddy, Potato, Cabbage, Cauliflower and Fodder Crops like Maize, Cowpea, Sorghum and Rice Bean. **B. Non-Agricultural Activities: -** Commercial Dairy Farming with 04 Cross Breed Cows and 02 Breed Up-graded Deshi Cows and 06 Calves.
Technical Components of the Enterprise	• Artificial Insemination (A. I.) in cattle • Conscientious heat detection • Detection of oestrous by fern pattern of cervical mucous • Proper timing of insemination • Low cost feed formulation • Feeding, management and care of growing calves and heifers • Cultivation and feeding of green fodder Feeding of area specific mineral mixture. 1. Crossbreeding and Breed up-gradation through A. I. is the most suitable and economical technique for generating higher genetic and production potential. Crossbreeding in indigenous low producing cattle with superior germplasm influences the genetic potential of the crossbred so born giving an Average Milk Yield of 8 Litres / Cross bred Cow / Day and Breed Up-graded Cows yields about 6 Litres / Cow / Day. 2. The age at puberty have been attended at 2 to 2.5 years of age. All the female calves fed properly from the beginning of the birth so that they attain desired body weight and maturity at an early age. 3. The traditional feeding practice is modified by providing mineral mixture, concentrate and green forages and formulation of low cost feed. After parturition animals usually always come to heat up to 2- 2 1/2 months.
Status of entrepreneur before and after the enterprise	**Parameters** — **Before** — **After** Yield of Product — 8 lits. / Cross Bred Cow / Day 6 lits. / Up-graded Cow / Day

	Fixed Cost		Rs. 3,90,000.00 / Year
	Recurring Cost		Rs. 86,000.00 / Year
	Gross Income		Rs. 7,76,000.00 / Year
	Net Profit	Rs. 30,000.00 per Year from Agricultural Operations	Rs. 3,00,00.00 / Year
	B:C Ratio		1.63
	Marketing		Door to door sale
Present working condition of enterprise in terms of raw materials availability, labour availability, consumer preference, marketing the product etc. (Economic viability of the enterprise):	**Raw Material Availability: - Feed Ingredients and other feed** materials are procured from his own agricultural land as well Green Fodders are produced in the adjacent farm land of the dairy. **Labour Availability:** - Family Labour is used and also local Labours are available and used. **Consumer Preference: -** Farm milk is preferred by the consumers who are loyal customers to Sri Mandal. **Marketing the product: -** Mainly door to door sale method is used and sold to both domestic houses and small businesses like tea stall, sweet shops etc.		
Horizontal spread of enterprise	20 (Twenty) farmers in the Locality adopted the Technology and related Activities having getting an information from Sri Mandal. Sri Debasish Mandal's Cows have been awarded as "Best Milch Cattle" at the "Prani Sampada (Animal Resource) Week" organized by the Dept. of Animal Resource Development, Govt. of West Bengal.		

Sri Debasish Mandal of Village: - Surul, P. O. – Sriniketan, Pin. – 731236, Dist. – Birbhum, West Bengal along with the Rathindra KVK Scientist at his Small Scale Dairy Farm

4.6. Any other initiative taken by the KVK

A. Minikit Demonstration of different varieties of Wheat under Outreach Programme, ICAR-IARI, Pusa, Samastipur, Bihar

Crop	Thematic area	Name of the varieties	No.of farmers	Area	Yield (q /ha)		% increase in yield
					Demo	Check	
Wheat Rabi, 2018-19	Varietal replacement	HD 2967	14	3.00 ha	40.50	30.20 (Sonalika)	31.00

B. Demonstration of Green Fodder under outreach programme, Regional Fodder Station, Kalyani, Ministry of Agriculture and Farmers' Welfare, Govt. of India, Nadia, West Bengal

Crop	Thematic area	Name of the varieties	No. of farmers	Area (ha)	Yield(q/ha)		% increase in yield
					Demo	Check	
Sorghum , Pre Kharif 2018	Varietal replacement	PC 23	28	1.00	785.50	398.3 (Goma)	97.21
Maize Pre Kharif, 2018	Varietal replacement	J - 1006	28	1.00	392.25	292.5 (Local improved)	34.10
Rice bean Pre Kharif, 2018	New introduction	Bidhan - 2	28	1.00	350.5	-	-
Oat, Rabi, 2018- 19	Varietal replacement	Kent	08	00.63	308.8	73.7 (Local Grass in Grazing Land)	319.00

5. LINKAGES

5.1. Functional linkage with different organizations

Name of Organization	Nature of linkage
Palli Sanghatana Vibagh, Visva-Bharati, Sriniketan, Birbhum	This linkage is mainly focusing on organizing joint Training programmes for the villagers as well as giving exposure to the clientele of the Rathindra KVK as about the field level situation
All India Radio, Santiniketan Kendra, Birbhum, West Bengal	Broadcasting of different Rathindra KVK activities as well as live Phone –In Programmes are being organized.
Doordarshan, Santiniketan Kendra, Birbhum, West Bengal	Telecasting of different Rathindra KVK activities as well as live phone –In Programmes are being organized. As a result a vast number of farmers, farm women and rural youth are being exposed to multiple information sources regarding multiple issues. This is necessary to mention that the viewers of these Programmes have been immensely benefited by viewing Method Demonstration on various new Technologies.
Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal	This linkage is mainly on the following aspects:- - Conducting regular basis Human Resource Development Training Programme in different discipline. - Facilitate for Annual Action Plan Development. - Facilitate On Farm Testing Modules. - Provide different location specific germ-plasm.
West Bengal University of Animal and Fishery Sciences, Belgachia, Kolkata, West Bengal	This linkage is mainly on the following aspects:- - Conducting regular basis Human Resource Development Training Programme in different discipline. - Facilitate for Annual Action Plan Development. - Facilitate On Farm Testing Modules. - Provide different location specific mineral mixture, vaccines, medicines, seeds of Improved

	Varieties of Green Fodder Crops.
ICAR-Indian Agricultural Research Institute (IARI), Regional Station, Samastipur, Bihar	The linkage is mainly based on Collaborative Demonstration Programmeon newer Wheat and Paddy varieties. As a result of this linkage, the farmers of Birbhum District are being exposed to newer varieties of Wheat and scented as well as non-scented Paddy varieties. Some varieties have shown very good potential for future introduction in the District. - Provide Weather related Information for Crop based Action Plan Development.
ICAR-National Dairy Research Institute (NDRI), Eastern Regional Station (ERS), Kalyani, West Bengal	This Linkage is basically for organizing the Collaborative Animal Health Camps, Cattle Infertility Treatment Camps, Hybrid Napier Distribution Camps and for organizing Front Line Demonstrations on improved varieties of Fodder Crops like Berseem, Oat etc.
Regional Fodder Station, Kalyani, Ministry of Agriculture and Farmers' Welfare, Govt. of India, Nadia, West Bengal	This Linkage is basically for organizing the Front Line Demonstration (FLD) Programmes on various Improved Varieties of Green Fodder.
ICAR-Indian Grassland and Fodder research Institute (IGFRI), Jhansi, Uttar Pradesh	This Linkage is basically for organizing the Front Line Demonstration (FLD) Programmes on various Improved Varieties of Green Fodder.
Agriculture Skill Council of India (ASCI), National Skill Development Corporation (NSDC), Ministry of Skill Development and Entrepreneurship, Govt. of India, New Delhi	This linkage is for Training of Trainers, formulation of Training Courses, assessment and providing Skill Training Certificates to the Trainees of ASCI Skill Training Courses like Hatchery Production Worker, Animal Health Worker, Agriculture Extension Service Provider etc.
National Fisheries Development Board (NFDB), Ministry of Agriculture and Farmers' Welfare, Govt. of India, Hyderabad, Telengana	This linkage is for providing Human Resource Development Training to KVK Scientists as well as for organizing Long Duration Skill and Entrepreneurship Development Training Programmes to fish farmers and interested Rural Youths on different aspects of Fish Production and for hand-holding the Fish Growers for different Governmental Schemes in Fishery Sector.
National Institute of Agricultural Extension Management (MANAGE), Ministry of Agriculture and Farmers' Welfare, Govt. of India, Hyderabad, Telengana	This linkage is for providing Human Resource Development Training to KVK Scientists as well as for organizing Diploma in Agricultural Extension Services for Input Dealers (DAESI), a Long Duration Skill and Entrepreneurship Development Training Programmes for the Agricultural Input Dealers for developing them as grass-root level Extension Functionaries.
Line Departments like Agriculture, Horticulture and Food Processing Industries, Animal Resource Development, Fisheries etc. of the Govt. of West Bengal, Birbhum, West Bengal	This linkage is basically on Technological back-stopping of the Extension and developmental activities of various developmental departments of the Govt. of West Bengal.
National Research Centre on Weed Control, Jabbalpur, Madhya Pradesh	The linkage is now focusing on Technical Support for organizing Training and Awareness Camps for controlling weeds specifically weeds like *Parthenium*. The farmers of this District get immense benefit as they get exposure on *Parthenium* and other weeds through participating in "*Parthenium* Control Week Programme".
Agricultural Technology Management Agency (ATMA), Birbum, Suri, Birbhum, West Bengal	The linkage is now focusing on Orientation Farmers' training and Programme Training for Head Master / Achiever Farmer. Various Short Term Researches on Topics related with Fishery, Agronomy etc. are also being performed utilizing these linkages Programme.
Agricultural Technology Management Agency (ATMA), Various Districts of West Bengal	The linkage is now focusing on organizing Exposure Visits of the members of the various Block Farm Information and Advisory Centre (FIAC) Teams at the Rathindra KVK for a firsthand experience on cutting edge technologies and products related to agriculture and related sectors as well as for undergoing relevant knowledge and skill development training programmes at the Rathindra KVK, Birbhum.
National Bank for Agriculture and Rural Development (NABARD), Birbhum, Suri, Birbhum, West Bengal	The linkage mainly focuses on formation of Farmers Club, organizing Training for vulnerable areas, Organizing Technology Weeks etc. Some Farmers' Clubs are doing excellent work and they are benefitted from this Linkage.
	Besides above mentioned Linkages, NABARD, Birbhum sponsored the Technology Week – 2015 and Technology Week - 2016, organized by the Rathindra KVK in its Campus. The

	NABARD has also sponsored Skill Development Trainings in the Farm Sectors in the Financial Year of 2015 – 2016.
State Agricultural Management, Extension and Training Institute (SAMETI), Narendrapur, 24 Parganas (South), West Bengal.	This linkage is mainly on the following aspects - Conducting regular basis Human Resource Development Training Programme in different discipline for Scientists of the Rathindra KVK. - All the linkage activities profoundly help the Rathindra KVK clientele in updating their knowledge, skill and attitude.
Lok Kalyan Parishad, Bolpur, Birbhum	This linkage gives importance as well as focuses on Training and Demonstration for stakeholders for far flung areas of Birbhum District where Institutional Linkages with villagers of those areas are very weak.
Tagore Society For Rural Development, Santiniketan, Birbhum West Bengal	This linkage gives importance as well as focuses on Training and Demonstration for stakeholders for far flung areas of Birbhum District where Institutional Linkages with villagers of those areas are very weak.
Luthern World Services, Kolkata, West Bengal	This linkage gives importance as well as focuses on Training and Demonstration for stakeholders for far flung areas of Birbhum District, especially areas bordering Jharkhand State whereInstitutional Linkages with villagers of those areas are very weak.
Asansol Burdwan Seva Kendra, Burdwan, West Bengal	This linkage gives importance as well as focuses on joint Training and Demonstration for stakeholders for various non-adopted villages of Birbhum District as well as far flung areas of Birbhum District, especially areas where Institutional Linkages with villagers of those areas are very weak.
Manab Jamin, Birbhum, West Bengal.	This linkage gives importance as well as focuses on joint Training and Demonstration for stakeholders for various non-adopted villages of Birbhum District.
Bolpur Krishija Samabay Samity, Bolpur, Birbhum, West Bengal	This linkage is basically focuses on supply of quality agricultural inputs for various FLD and OFT Programmes of the Rathindra KVK undertakes. As a result, the clientele of the Rathindra KVK is immensely benefitted through experiencing newer and better quality agricultural inputs.
National Seed Corporation, Kolkata, West Bengal	This linkage is basically focuses on supply of quality breeder and foundation seeds of various Crops for various FLD and OFT Programmes of the Rathindra KVK undertakes. As a result, the clientele of the Rathindra KVK is immensely benefitted through experiencing newer and better quality seeds.
West Bengal State Seed Corporation, Kolkata, West Bengal	This linkage is basically focuses on supply of quality breeder and foundation seeds of various Crops for various FLD and OFT Programmes of the Rathindra KVK undertakes. As a result, the clientele of the Rathindra KVK is immensely benefitted through experiencing newer and better quality seeds.
Panchayati Raj Institutions (PRIs), Birbhum, West Bengal	This linkage helps the Rathindra KVK to get base-line information for choosing Target Areas both on Geographical Terms as well as on Technological Terms by going through various surveys and reports generated by the PR Institutions of the Birbhum District.
Other Krishi Vigyan Kendras (KVKs)	This linkage helps the farmers of various Districts to have an exposure and visit to Rathindra KVK and exchange ideas and experiences with farmers of the District of Birbhum and Scientists of the Rathindra KVK.

5.2. List of special programmes undertaken during 2018-19 by the KVK, which have been financed by ATMA/ Central Govt./ State Govt./NABARD/NHM/NFDB/Other Agencies (information of previous years should not be provided)

a) Programmes for infrastructure development

Name of the programme/ scheme	Purpose of programme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Establishment of the Demonstration Unit on Micro-Irrigation System in the Rathindra KVK	To demonstrate the efficiency of Micro-Irrigation System in Orchards and farms among the visiting practicing farmers, farm women, rural youths, grass-root level extension functionaries for popularizing the sustainable and economic development of Agriculture and related Sectors in a water scare District like Birbhum District	18.12.2018.	Indian Council of Agricultural Research (ICAR), Govt. of India	1,00,000.00

(b) Programme for other activities (training, FLD, OFT, Mela, Exhibition etc.)

Name of the Programme/Scheme	Purpose of Programme	Date/ Month of Initiation	Funding Agency	Amount (Rs.)
Vaccination Camp	To provide treatment and FMD vaccination	13.05.2018	Dept. of Animal Resource Development, Govt. of West Bengal	The total cost of the Vaccines was borne by the Funding Agency.
Vaccination Camp	To provide treatment and R_2B and PPR vaccination	11.06.2018	Dept. of Animal Resource Development, Govt. of West Bengal	The total cost of the Vaccines was borne by the Funding Agency.
Front Line Demonstration (FLD) on Green Fodder Crop Rice Bean, Var. Bidhan - 2	To popularize the improved cultivation practices and use of the Green Fodder Crops	June, 2018	Regional Station for Forage production and demonstration, Department of Animal Husbandry and Dairying, Ministry of Agriculture and Farmers' Welfare, Govt. of India	The seeds of the fodder crop were given by the Funding Agency free of cost.
Front Line Demonstration (FLD) on Green Fodder Crop Maize, Var. J - 1006	To popularize the improved cultivation practices and use of the Green Fodder Crops	June, 2018	Regional Station for Forage production and demonstration, Department of Animal Husbandry and Dairying, Ministry of Agriculture and Farmers' Welfare, Govt. of India	The seeds of the fodder crop were given by the Funding Agency free of cost.
Vaccination Camp	To provide treatment and HSBQ vaccination	29.07.2018	Dept. of Animal Resource Development, Govt. of West Bengal	The total cost of the Vaccines was borne by the Funding Agency.
Vaccination Camp	To provide treatment and FMD vaccination and mineral mixture distribution	24.11.2018	Dept. of Animal Resource Development, Govt. of West Bengal	The total cost of the Vaccines was borne by the Funding Agency.
Training Programme on Importance of Black Bengal Goat rearing	To impart skills on Improved rearing Practices of Black Bengal Goats	26.11.2018.	ATMA, Birbhum	The total cost of the Programme was borne by the Funding Agency.
Training Programme on rearing of Khaki Campbell Ducks	To impart skills on Improved rearing Practices of Campbell Ducks	27.11.2018.	ATMA, Birbhum	The total cost of the Programme was borne by the Funding Agency.
Training Programme on Fisheries Development in Derelict Water-bodies for Socio-Economic Improvement	Use of the potential derelict water-bodies for Pisciculture	27.12.2018.	ICAR – Central Inland Fisheries Research Institute, Barrackpore	The total cost of the Programme was borne by the Funding Agency.
Vaccination Camp	To provide treatment and FMD, PPR vaccination	31.12.2018	Dept. of Animal Resource Development, Govt. of West Bengal	The total cost of the Vaccines was borne by the Funding Agency.
Animal Health Camp	To provide treatment and FMD, PPR vaccination	23.03.2019	Dept. of Animal Resource Development, Govt. of West Bengal	The total cost of the Vaccines was borne by the Funding Agency.

6. PERFORMANCE OF INFRASTRUCTURE IN KVK

6.1. Performance of demonstration units (other than instructional farm)

Sl. No.	Name of demo Unit	Year of estt.	Area (Sq. mt)	Details of production			Amount (Rs.)		Remarks
				Variety/breed	Produce	Qty.	Cost of inputs	Gross income	
1.									
2.									
3.									
4.									
5.									
6.									
7.									
	Total								

6.2. Performance of Instructional Farm (Crops)

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.(q)	Cost of inputs	Gross income	
Paddy	15.07.2018.	17.12.2018.	0.93	Rani Dhan	TL Seeds	15.00	Rs. 27,000.00	Rs. 45,000.00	Kept in Go-Down
Paddy	24.07.2018.	10.11.2018	0.13	Gotra Bidhan - 3	TL Seeds	02.00	Rs. 3,600.00	Rs. 6,000.00	Kept in KVK Go-down
Paddy	22.07.2018.	08.11.2018.	0.13	Radhunipagol	TL Seeds	01.00	Rs. 1,820.00	Rs. 4,000.00	Kept in KVK Go-down
Ekangi	08.06.2018.	18.09.2018.	0.13	*K. galanga*	-	02.00	Rs. 12,000.00	Rs. 22,000.00	The Whole Quantity was sold to 40 farmers.
Linseed	20.04.2018.	05.08.2018.	0.05	Sekhar	TL Seeds	00.40	Rs. 1,100.00	Rs. 2,000.00	Kept in KVK Go-down
Elephant Foot Yam	20.04.2018.	15.10.2018.	0.13	Bidhan Kusum	-	01.00	Rs. 5,000.00	Rs. 10,000.00	The Whole Quantity was sold to 10 farmers.
Green Gram	15.03.2019.	-	0.13	Samrat	-	-	-	-	The crop is in field condition.
Total			**01.63**			**21.40**	**Rs. 50,520.00**	**Rs. 89,000.00**	

6.3. Performance of Production Units (bio-agents / bio pesticides/ bio fertilizers etc.,)

Sl. No.	Name of the Product	Qty (Kg)	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1.	*Azolla*	800.00	8,000.00	40,000.00	450.0 kgs. were utilized in FLD Programmes, 284.00 kgs. was distributed among the beneficiaries under Krishi Kalyan Abhiyan and rest amount was utilized in the Instructional Farms of the Rathindra KVK

2.	Vermi-Compost	1500.0	2,800.00	15,000.00	170.00 kgs. of Vermi-Compost were sold and remaining the Vermi-compost was used in KVK Flower and Vegetable garden.
3.	Earth-worm	3,500 in nos.	500.00	17,500.00	Earth-worms were supplied to 35 numbers of the farmers free of cost for encouragement in future use.

6.4. Performance of instructional farm (livestock and fisheries production)

Sl. No.	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1.	**Japanese Quail**	***Coturnix coturnix japonica***	**Layer and Adults** **Quail Eggs**	**240 nos.** **250 nos.**	**3,000.00**	**12,000.00**	**Net Profit – Rs. 9,000.00** **Net Profit – Rs. 250.00**
2.	**Fishes**	**Indian Major Carps**	**Table Fishes**	**02.00 q**	**11,000.00**	**38,000.00**	**Net Profit – Rs. 27,000.00**
		Exotic Carps	**Table Fishes**	**01.30 q**			
		Small Fishes	**Table Fishes**	**00.68 q**			
		Indian Major Carps	**Spawns**	**6,00,000 nos.**	**3,000.00**	**7,200.00**	**Net Profit – Rs. 4,200.00**

6.5. Utilization of hostel facilities

Accommodation available (No. of beds) 27 + 20 = 47

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April, 2018	-	-	**N. A.**
May, 2018		-	**N. A.**
June, 2018		-	**N. A.**
July, 2018	02 + 17	06 + 51 (03 + 03)	**N.A.**
August, 2018	-	-	**N. A.**
September, 2018	28	56 (02)	**N.A.**
October, 2018	02 + 01	06 + 01 (03 + 01)	**N.A.**
November, 2018	20 + 13	280 + 13 (20 + 01)	**N.A.**
December, 2018	20 + 10	140 + 10 (20 + 01)	**N.A.**
January, 2019	01 + 21	02 + 21 (02 + 21)	**N. A.**
February, 2019	20 + 20 + 30	480 + 480 + 840 (24 + 24 + 28)	**N.A.**
March, 2019	20 + 20 + 30	20 + 20 + 60 (01 + 01 + 02)	**N. A.**
Total :	**275**	**2486 (157)**	**N. A.**

6.6. Utilization of staff quarters

Whether staff quarters has been completed:
No. of staff quarters:
Date of completion:
Occupancy details:

Months	Q I	QII	Q III	QIV	Q V	QVI

7. FINANCIAL PERFORMANCE

7.1. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
Visva-Bharati University A/c. Krishi Vigyan Kendra A/c. No. 10598447180	**State Bank of India**	**Santiniketan, P. O. – Santiniketan, Dist. – Birbhum, Pin. – 731235, West Bengal.**	**10598447180**

7.2. Utilization of funds under CFLD on Oilseed *(Rs. In Lakhs)*

Item	Released by ICAR		Expenditure		Unspent balance as on1st. April, 2019
	Kharif	Rabi	Kharif	Rabi	
Sesame, Mustard, Linseed	1.00	1.95	1.74793	00.70	00.974

7.3. Utilization of funds under CFLD on Pulses *(Rs. In Lakhs)*

Item	Released by ICAR		Expenditure		Unspent balance as on 1st. April, 2019
	Kharif	Rabi / Summer	Kharif	Rabi / Summer	
Black Gram, Chick Pea, Lentil, Field Pea	1.80	7.80	1.03	5.907	2.69

7.4. Utilization of KVK funds during the year 2018-19 (Not audited)

Sl. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	127.00	127.00	126.986
2	Traveling allowances	00.80	00.80	00.43
3	Contingencies	12.00	12.00	11.85
A				
B				
C				
D				
E				
F				
G				
H				
I				
J	Swachhta Expenditure			
TOTAL (A)				

B. Non-Recurring Contingencies				
1				
2				
3				
4				
TOTAL (B)				
C. REVOLVING FUND				
GRAND TOTAL (A+B+C)		**139.80**	**139.80**	**139.266**

7.5. Status of revolving fund (Rs. in lakh) for last three years

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year (Kind + cash)
2015-16	2.3330738	1.58382	1.29424	2.6226538
2016-17	2.6226538	1.06356	0.71855	2.9676638
2017-18	2.9676638	2.19133	1.93960	3.2193938
2018-19	3.2193938	2.03150	1.59005	3.6608438

7.6. (i) Number of SHGs formed by KVKs - 01

(ii) Association of KVKs with SHGs formed by other organizations indicating the area of SHG activities – 04 Numbers of SHGs involved in (a) Certified Seed Production of Paddy, Pulses and Oilseeds; (b) Production of Vermi-Compost, (c) Production of Mushroom and (d) Goatery.

(iii) Details of marketing channels created for the SHGs – Rathindra KVK is acting as Linkage between the members of SHGs and "SUFAL BANGLA", an initiative by the Dept. of Agricultural Marketing for marketing the products of SHGs through Mobile Vans and Stationery Showrooms and from this Year the Rathindra KVK is an active partner of the RKVY Sponsored Project on "Up-gradation of Market-Linkage Network for Promotion of Bengal Aromatic Rice", being executed by the Department of Agronomy, Bidhan Chandra Krishi Viswavidyalaya, P. O. – Krishi Viswavidyalaya, Dist. - Nadia, Pin. – 741252, West Bengal, India for promoting the production and marketing of the traditional aromatic Paddy Variety of Birbhum District viz. Radhunipagol by the members of the SHGs.

7.7. Joint activity carried out with line departments and ATMA

Name of Activity	Number of Activity	Season	With Line Department	With ATMA	With Both
Vaccination Camp	01	Pre-Kharif Season	Dept. of Animal Resource Development, Govt. of West Bengal	-	-
Exposure Visit of the farmers organized by the Luthern World Services, Birbhum	01	Pre-Kharif Season	-	Luthern World Services, Birbhum	-
Vaccination Camp	01	Kharif Season	Dept. of Animal Resource Development, Govt. of West Bengal	-	-
Exposure Visit of the members of the FIAC, ATMA, Sarenga CD Block, Bankura to the Rathindra KVK, Birbhum	01	Kharif Season	-	ATMA, Bankura	-
Exposure Visit of the members of the FIAC,ATMA, Beldanga - II	01	Kharif Season	-	ATMA, Murshidabad	-

CD Block, Murshidabad to the Rathindra KVK, Birbhum					
Vaccination Camp	01	Kharif Season	Dept. of Animal Resource Development, Govt. of West Bengal	-	-
Exposure Visit of the members of the FIAC, ATMA, Bharatpur - I CD Block, Murshidabad to the Rathindra KVK, Birbhum	01	Kharif Season	-	ATMA, Murshidabad	-
Exposure Visit of the members of the FIAC, ATMA, Suri – II CD Block, Birbhum to the Rathindra KVK, Birbhum	01	Kharif Season	-	ATMA, Birbhum	-
Exposure Visit of the members of the FIAC, ATMA, Faridpur-Durgapur CD Block, Paschim Bardhaman to the Rathindra KVK, Birbhum	01	Kharif Season	-	ATMA, Paschim Bardhaman	-
Exposure Visit of the members of the FIAC, Karimpur - II CD Block, Nadia to the Rathindra KVK, Birbhum	01	Rabi Season	-	ATMA, Nadia	-
Vaccination Camp	01	Rabi Season	Dept. of Animal Resource Development, Govt. of West Bengal	-	-
Exposure Visit of the Students of the DAESI Course organized by Purba Bardhaman KVK, Bud Bud, Purba Bardhaman	01	Rabi Season	MANAGE, Govt. of India, SAMETI, West Bengal, ATMA, Purba Bardhaman and Purba Bardhaman KVK	ATMA, Purba Bardhaman	-
Training Programme on Importance of Black Bengal goat rearing	01	Rabi Season	-	ATMA, Birbhum	-
Training Programme on Rearing of Khaki Campbell ducks	01	Rabi Season	-	ATMA, Birbhum	-
Vaccination Camp	01	Rabi Season	Dept. of Animal Resource Development, Govt. of West Bengal	-	-
Exposure Visit of the members of the FIAC, ATMA, Lalbagh Block, Murshidabad to the Rathindra KVK, Birbhum	01	Rabi Season	-	ATMA, Murshidabad	-
Animal Health Camp	01	Rabi Season	Dept. of Animal Resource Development, Govt. of West Bengal	-	-

8. Other information

8.1. Prevalent diseases in Crops

Name of the disease	Crop	Date of outbreak	Area affected (in ha)	% Commodity loss	Preventive measures taken for area (in ha)

8.2. Prevalent diseases in Livestock / Fishery

Name of the disease	Species affected	Date of outbreak	Number of death/ Morbidity rate (%)	Number of animals vaccinated	Preventive measures taken in pond (in ha)

9.1. Nehru Yuva Kendra (NYK) Training

Title of the training programme	Period		No. of the participant		Amount of Fund Received (Rs)
	From	To	M	F	

9.2. PPV & FR Sensitization training Programme

Date of organizing the programme	Resource Person	No. of participants	Registration (crop wise)	
			Name of crop	No. of registration

9.3. *mKisan* Portal (National Farmers' Portal / SMS Portal)

Type of message	No. of messages	No. of farmers covered
Crop	23	12310
Livestock	37	17020
Fishery	13	3670
Weather	37	4620
Marketing	49	6920
Awareness	37	7900
Training information	13	8362
Other	-	-
Total	**209**	**60802**

9.4. *KVK* Portal and Mobile App

Sl. No.	Particulars	Description
1.	No. of visitors visited the portal	1512
2.	No. of farmers registered in the portal	-
3.	Mobile Apps developed by KVK	-
4.	Name of the App	-
5.	Language of the App	-
6.	Meant for crop/ livestock/ fishery/ others	-
7.	No. of times downloaded	-

9.5. a. Observation of Swachh Bharat Programme

Date / Duration of Observation	Activities undertaken
16.10.2018.	All the staff of the Rathindra KVK has taken a whole hearted effort to clean the Office Building Complex of the KVK through cleaning the dusts, cob webs, weeding out the weeds etc. through manual work.
17.10.2018.	All the staff of the Rathindra KVK has tried their level best to clean the garbage, dust and debris accumulated on the Roof of the Administrative Building through the manual work.
18.10.2018.	All the staff of the Rathindra KVK has tried their level best to clean the garbage, dust and debris accumulated in and around the Trainees' Hostel of the Rathindra KVK through the manual work.
19.10.2018.	The Instructional Farm of the Rathindra KVK like Orchard, Crop Cafeteria, Nursery etc. and Demonstration Units like the Fish Breeding Unit, the Poultry and Duckery Units etc. were thoroughly cleaned, the weeds were manually up-rooted and the farm wastages and the crop residues were used as input in the Vermi-Composting Unit of the Rathindra KVK. In this Operational procedure, the Threshing Floor of the Instructional Farm and the Medicinal Plants Garden of the Rathindra KVK was thoroughly cleaned and the Farm debris was utilized as input material for the Vermi-Composting Unit of the Rathindra KVK.
20.10.2018.	All the staffs of the Rathindra KVK has taken initiatives to clean the remaining debris, garbage and dusts inside, outside and roof of the Administrative Building of the Rathindra Krishi Vigyan Kendra.
21.10.2018.	All the staff of the Rathindra KVK has taken a whole hearted effort to clean the Office Building Complex of the KVK through cleaning the dusts, cob webs, weeding out the weeds etc. through manual work.
22.10.2018.	All the staff of the Rathindra KVK has taken a whole hearted effort to clean the outside the Office Building Complex of the KVK including the main Gate. The main path and adjoining areas through cleaning the dusts, cob webs, weeding out the weeds etc. through manual work.
23.10.2018.	All the staff of the Rathindra KVK has taken a whole hearted effort to clean the outside the Office Building Complex of the KVK including the ornamental Hedges and Garden and adjoining areas through cleaning the dusts, cob webs, weeding out the weeds etc. through manual work.
24.10.2018.	Rathindra KVK has organized a Mobile Publicity Programme regarding the "*SWACHHTA PAKHWARA"* through utilizing the Office Jeep of the Rathindra KVK. The Jeep went to various Villages of the District of Birbhum, i.e. the mandate District of the Rathindra KVK and spreaded the message about the need and importance of the cleanliness in the day to day life as well as in all the Agricultural and related activities. This programme of the Rathindra KVK invoked a great response among the Villagers in all the places where this Mobile Jeep went. One of the villages was Domdoma, P. O. – Albandha, Community Development (CD) Block– Bolpur-Sriniketan, Dist. – Birbhum. At this village, the villagers along with school going students were seen attentively listening to the Campaign being launched by the Scientists of the Rathindra KVK.
25.10.2018.	The Rathindra KVK has organized an Awareness Camp for Primary level school students, where 72 (Seventy Two) students from Assadullahpur Primary School and Dhanyasara Primary School were present at the Village - Assadullahpur, P. O. – Sattore, Police Station – Bolpur, Community Development (CD) Block – Bolpur-Sriniketan, Dist. – Birbhum. In this Awareness Camp, the students were highlighted on the general importance of the cleanliness in the day to day life as well as the importance of the call of the Father of the Nation, Mahatma Gandhi as well as the point of view expressed by the present Union Government headed by the Honorable Prime

	Minister, Sri Narendra Bhai Modi were discussed in details with special emphasis on nurturing the habit of cleanliness from very beginning of a life at a tender age by the scientists of the Rathindra KVK. The conceptual discussion was followed by a lively question-answer session which was succeeded by a series of concrete actions such as cleaning of the Primary School Building and its Campus, weeding out the weeds grown in and around these campuses were spontaneously taken up by the participant students present in the Awareness Camp.
26.10.2018.	Rathindra KVK has organized a Mobile Publicity Programme regarding the "*SWACHHTA PAKHWARA"* through utilizing the Office Jeep of the Rathindra KVK. The Jeep went to various Villages of the District of Birbhum, i.e. the mandate District of the Rathindra KVK and spreaded the message about the need and importance of the cleanliness in the day to day life as well as in all the Agricultural and related activities. This programme of the Rathindra KVK invoked a great response among the Villagers in all the places where this Mobile Jeep went. One of the villages was Durgapur, P. O. – Panchshoya, Police Station – Bolpur, Community Development (CD) Block–Bolpur-Sriniketan, Dist. – Birbhum. At this village, the villagers along with school going students were seen attentively listening to the Campaign being launched by the Scientists of the Rathindra KVK.
27.10.2018.	The Rathindra KVK has organized an Awareness Camp for farmers of the Village - Bishnubati, P. O. – Sattore, Police Station – Panrui, Community Development (CD) Block – Bolpur-Sriniketan, Dist. – Birbhum. In this Awareness Camp, the practicing farmers, farm women were highlighted on the general importance of the cleanliness in the day to day life as well as the importance of the call of the Father of the Nation, Mahatma Gandhi as well as the point of view expressed by the present Union Government headed by the Honorable Prime Minister, Sri Narendra Bhai Modi were discussed in details with special emphasis on nurturing the habit of cleanliness from very beginning of a life at a tender age by the scientists of the Rathindra KVK. The conceptual discussion was followed by a lively question-answer session which was succeeded by a series of concrete actions such as cleaning of the village Primary School Building and its Campus, weeding out the weeds grown in and around these campuses were spontaneously taken up by the participant students present in the Awareness Camp.
28.10.2018.	The Instructional Farm of the Rathindra KVK like Orchard, Crop Cafeteria, Nursery etc. and Demonstration Units like the Fish Breeding Unit, the Poultry and Duckery Units etc. were thoroughly cleaned, the weeds were manually up-rooted and the farm wastages and the crop residues were used as input in the Vermi-Composting Unit of the Rathindra KVK. In this Operational procedure, the Threshing Floor of the Instructional Farm and the Medicinal Plants Garden of the Rathindra KVK was thoroughly cleaned and the Farm debris was utilized as input material for the Vermi-Composting Unit of the Rathindra KVK. The Threshing Floors of the Instructional Farms of the Rathindra KVK was thoroughly cleaned on this occasion.
29.10.2018.	All the Staffs of the Rathindra KVK has organized a thorough cleaning operation through manual weeding out of weeds, cleaning of debris with the help of brooms, destruction of weeds, placing the garbage in the specific garbage cans etc. in the areas adjacent with the Administrative Office Building of the Rathindra KVK as well as the Trainees Hostel of the Rathindra KVK.
30.10.2018.	All the Staff of the Rathindra KVK organized a Walk inside the Sriniketan Campus of Visva-Bharati to make the people aware abot the importance of "*SWACHHTA PAKHWARA"*.
31.10.2018.	All the Staff of the Rathindra KVK took a pledge on cleanliness to make the KVK premises and outside of the KVK premises neat and clean with their all efforts.

b. Details of Swachhta activities with expenditure

Activities	Number	Expenditure (in Rs.)
1. Digitization of office records / e-office	02	
2. Basic maintenance	02	
3. Sanitation and SBM	24	
4. Cleaning and beautification of surrounding areas	24	
5. Vermicomposting / Composting of biodegradable waste management & other activities on generate of wealth for waste	24	
6. Used water for agriculture/ horticulture application	-	
7. Swachhta Awareness at local level	24	
8. Swachhta Workshops	-	
9. Swachhta Pledge	01	
10. Display and Banner	02	
11. Foster healthy competition	-	
12. Involvement of print and electronic media	-	
13. Involving the farmers, farm women and village youth in the adopted villages (no of adopted village)	24	
14. No of Staff members involved in the activities	16	
15. No of VIP/VVIPs involved in the activities	-	
16. Any other specific activity (in details)	-	10,000.00
Total	**143**	**10,000.00**

9.6. Observation of National Science day

Date of Observation	Activities undertaken

9.7. Programme with Seema Suraksha Bal / BSF

Title of Programme	Date	No. of participants

9.8. Agriculture Knowledge in rural school

Name and address of school	Date of visit to school	Areas covered	Teaching aids used
Baliharpur Sammilani High School, P. O. – Baliharpur, Police Station – Md. Bazar, Dist. - Birbhum, West Bengal.	08.09.2018.	Role of Agriculture and allied sectors in everyday lives; Elementary knowledge about Agriculture and Allied Sectors.	Laptop Computer, LCD Projector, Black Board, Chalk, Specimens

9.9. Details of '*Pre-Rabi Campaign'* Programme

Date of programme	No. of Union Ministers attended the programme	No. of Hon'ble MPs (Loksabha/ Rajyasabha) participated	No. of State Govt. Ministers	Participants (No.)							Coverage by Door Darshan (Yes/No)	Coverage by other channels (Number)
				MLAs Attended the programme	Chairman Zila Panchayat	Distt. Collector/ DM	Bank Officials	Farmers	Govt. Officials, PRI members etc.	Total		
07.02.2019.	-	-	-	-	-	-	-	210	21	231	No	-

9.10. Details of Swachhta Hi Sewa programme organized

Sl. No.	Activity	No. of villages Involved	No. of Participants	No. of VIPs	Name (s) of VIP(s)
01.	Awareness Generation Programme on Importance of Cleaniness and Hygiene	10	263	-	-
02.	Campaign by RKVK Staff on Cleanliness through Cleaning Activity by the Staffs themseles	02	53	-	-

9.11. Details of Mahila Kisan Divas programme organized

Sl. No.	Activity	No. of villages Involved	No. of Participants	No. of VIPs	Name (s) of VIP(s)
01.	Training Programme, Film Show and Method Demonstration on Farm Women related Technologies in Agriculture and Related Sectors	12	68	-	-

9.12. No. of Progressive/ Innovative/ Lead farmer identified (category wise)

Sl. No.	Name of the Farmer	Address of the Farmer with contract No.	Innovation / Leading in Enterprise
1	Sri Srikanta Pandit	Vill. - Kamalakanpur; P.O.- Khanjanpur; Pin. – 731236, Dist. - Birbhum Mob- 9647886328	Leading in CFLD on Chick Pea cultivation in his locality in Rice - Fallow situation.
2	Sri Gadai Ghosh	Vill. – Rajatpur; P.O. - Rajatpur; Pin. – 731204, Dist. - Birbhum Mob- 8670076681	Leading in CFLD on Mustard cultivation in his village and surrounding village.
3	Sri Uday Ghosh	Vill. – Rajatpur; P.O. - Rajatpur; Pin. - 731204, Dist. - Birbhum Mob- 8670076681	Leading in CFLD implementation on new variety of Wheat in large area.
4	Sri Partha Mal	Vill. – Daranda; P.O. – Dwaronda; Pin. - 731236, Dist. - Birbhum Mob- 8926536411	Leading in Vermi-compost production sale and use in production of organic vegetables.
5	Sri Bipadtaran Ghosh	Vill. – Kartikdanga; P.O. – Raipur; Pin. - 731204, Dist. - Birbhum Mob- 8900484426	Leading in cultivation of large Ekangi (Medicinal Plant) as crop diversification and making market channel to sale it.
6	Smt. Malati Biswas	Vill. – Kalinagar Colony; P.O. – Chowhatta, Pin. – 731201, Dist. - Birbhum Mob- 9002176948	Leading to popularise Linseed cultivation in her area.

7	Smt. Lalita Tudu	Vill. – Faridpur; P.O. – Bilatisultanpur; Pin. - 731236, Dist. - Birbhum Mob- 9609646189	Leading in CFLD programme in Sesame as crop diversification in her locality.
8	Sri Lakshi Narayan Sen	Vill. – Senkapur; P.O. – Raipur; Pin. - 731204, Dist. - Birbhum Mob- 9933937720	Leading in CFLD programme on Field Pea in Rice - Fallow situation in his area.
9	Smt. Lakshmi Mardi	Vill. – Faridpur; P.O. – Bilatisultanpur; Pin. - 731236, Dist. - Birbhum Mob- 8942902797	Leading in CFLD on Summer Green Gram instead of Boro Rice in her area.
10	Sri Subhasish Ghosh	Vill. – Digha; P.O. – Digha; Pin. – 731236, Dist. - Birbhum Mob- 8640866516	Leading in using Drum Seeder for Paddy cultivation to promote conservation agriculture in his locality.
11	Sri Nisith Ghosh	Vill. – Damdama; P.O. – Laudaha; Pin. - 731204, Dist. - Birbhum Mob- 9800604849	Leading to implement CFLD on Black Gram and Sesame in Kharif season as crop diversification in his locality.
12	Sri KhudiramDebangshi	Vill. – Debanandapur; P.O. – Laudaha; Pin. - 731204 Mob- 9002688159	Leading in Lentil cultivation in Rice - Fallow under CFLD programme in his village and surrounding villages.
13	Sri Debashish Mandal	Vill. – Surul; P.O. – Sriniketan; Pin. - 731236, Dist. - Birbhum Mob- 7001358872	Leading in Dairy Farm
14	Sri Bidhan Sinha	Village: - Mirzapur, P. O. – Raipur, Pin. – 731204, Dist. – Birbhum, West Bengal. Mob- 9734134282	Innovative Dairy Farmer
15	Smt. Prava Biswas	Vill. – Melegar; P.O. – Illumbazar; Pin. – 731214, Dist. – Birbhum Mob- 8016284129	Progressive Rural Back Yard Poultry Farmer.
16	Smt. Sukodi Mardi	Vill. – Adibasi Para, Bishnubati, P. O. – Sattore; Pin. – 731236, Dist. – Birbhum Mob. 9647677362	Leading in Self Help Group formation, Handi Crafts and Rural Crafts production
17	Sri Tapan Ghosh	Village: Bishnubati, CD Block: Bolpur-Sriniketan, P. O. – Sattore, Pin. – 731236, Police Station: Sattore, District: Birbhum Mob: 9614057093	Innovative Farmer of SRI Marker and Rural Back Yard Poultry based on Improved Rural Breeds and Breed Up-gradation
18	Sri Mahadev Sarkar	Vill. – Choto Shimulia, P. O. – Panchshoya, Dist. – Birbhum Mob. - 8670077649	Leading in cultivation of High Value Low Volume Vegetables like Capsicaum, Broccoli, French Beans, Chinese Cabbage etc.
19	Sri Arabinda Pal	Vill. – Sundipur, P. O. – Bishnukhanda, Pin. – 731236, Dist. – Birbhum Mob: 7001024884	Innovative Farmer of Fish based Integrated Farming System (IFS)
20	Sri TuhinSubhra Dey	Vill. – Domdoma, P. O. – Albandha, Pin. – 731204, Dist. – Birbhum Mob: 9735174764	Innovative Farmer of Fish based Integrated Farming System (IFS)
21	Sri Abu Taher	Vill. – Mala, P. O. –Bergram, Dist. – Birbhum Mob. 7872454731	Innovative Farmer of Fish based Integrated Farming System (IFS)
22	Sr Arbinda Chakraborty	Vill. – Hatikra; P.O. – Panrui, Dist. – Birbhum Mob. - 9732332656	Innovative Farmer of modern Fish Hatchery.
23	Sri Sunil Das	Vill. – Srichandrapur; P.O.- Sattore; Pin. – 731236, Dist. – Birbhum Mob. - 9679885667	Innovative farmer of Glass Jar Hatchery, cultivation of Amur Common Carp
24	Sri Bapi Dhara	Vill. – Srichandrapur; P.O. – Sattore; Pin. – 731236, Dist. – Birbhum Mob. - 9851470447	Progressive farmer of culture of Amur, Jayanti Rohu, Monosex Tilapia
25	Sri Buddhadeb Ghosh	Vill. – Amgoria; P.O. – Bishnukhanda, Dist. – Birbhuum Mob. 9475097332	Progressive fish fingerling producer.
26	Sri Santosh Ghosh	Vill. – Amgoria; P.O. – Bishnukhanda, Dist. – Birbhum Mob. - 7076593717	Progressive fish fingerling producer.

9.13. Revenue generation

Sl. No.	Name of Head	Income(Rs.)	Sponsoring agency
1.	Revolving Fund (From sale of Farm Produce like Seeds, Planting Materials, Fruits from Mango Orchard, Demonstration Farm for Seed Production and Demonstration Progeny Orchards of the Rathindra KVK)	1,98,250.00	Own arrangement – KVK Demonstration Farms, Orchads, Poultry, Pond etc.
2.	Revolving Fund (From sale of Quail Birds of the Demonstration Poultry of the Rathindra KVK)	4,900.00	
3.	Trainees' Hostel Rent	30,200.00	
4.	Seminar Hall Rent	1,500.00	
5.	**Total**	**2,34,850.00**	

9.14. Resource Generation:

SL. No.	Name of the programme	Purpose of the programme	Sources of fund	Amount (Rs. lakhs)	Infrastructure created
01.	Pre Rabi Kisan Campaign Activities in 2018-19	To sensitize the farmers on ways and means to double the farmers' income by the year 2022 A. D. through exposing the Practicing Farmers, Farm Women and Rural Youths to the cutting edge Agricultural and related Sectors Technology for modernization of agriculture and related sectors and enhancement of productivity for more income generation from a limited resource base on a sustainable basis	ICAR, New Delhi	02.00	Various Exhibit Materials on Improved Technologies and Products for Agriculture and related Sectors
02.	Establishment of Demonstration Unit on Micro-Irrigation system	To demonstrate the efficiency of Micro-Irrigation System in Orchards and farms among the visiting practicing farmers, farm women, rural youths, grass-root level extension functionaries for popularizing the sustainable and economic development of Agriculture and related Sectors in a water scare District like Birbhum District	ICAR, New Delhi	01.00	Work is in progress.
03.	Cluster Front Line Demonstrations (Cluster FLDs) on Rabi and Summer Pulses	To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Rabi and Summer Pulse Production	ICAR, New Delhi	07.80	-
04.	Cluster Front Line Demonstrations (Cluster FLDs) on Kharif Pulses	To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Kharif Pulse Production	ICAR, New Delhi	01.80	-
05.	Cluster Front Line Demonstrations (Cluster FLDs) on Kharif and Rabi Oilseed	To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Kharif and Rabi Oilseeds Production	ICAR, New Delhi	02.95	-
06.	Skill Training for Rural Youth (STRY)	To develop human resources among the rural youths through Skill and Entrepreneurship	MANAGE, Hyderabad and SAMET,	00.42	-

		development Training Programmes on Various Aspects of Agriculture and related Sectors	Narendrapur, Kolkata		
07.	SWACCHA Action Plan in 2018-19	To generate awareness and skill of the practicing farmers, far women, rural youth and grass-root level extension functionaries in maintenance of hygienic condition and cleanliness a part and parcel of each and every aspect of daily economic and social life	ICAR, New Delhi	00.25	-
08.	Skill Development Training Programme on "Agriculture Extension Service Provider" and "Hatchery Production Worker – Fishery"	To develop human resources among the practicing farmers, farm women and rural youths through Skill and Entrepreneurship development Training Programmes on Various Aspects of providing Agriculture Extension Service and Hatchery Production Works in Fishery Sector	ICAR, New Delhi	05.20	Various Exhibit Materials, Books, Information Storage Mediums like Pen Drives, CDs, DVDs and Extension Literatures
09.	Diploma in Agricultural Extension Service for Input Dealers	To develop human resources among the Input Dealers through Skill, Knowledge and Entrepreneurship development Training Programmes on Various Aspects of Agricultural Extension Services	MANAGE, Hyderabad, Telengana	03.40	-
10.	District Kisan Mela in 2018-19	To sensitize the farmers on ways and means to double the farmers' income by the year 2022 A. D. through exposing the Practicing Farmers, Farm Women and Rural Youths to the cutting edge Agricultural and related Sectors Technology for modernization of agriculture and related sectors and enhancement of productivity for more income generation from a limited resource base on a sustainable basis through organizing Mela and Exhibition at District level	ICAR, New Delhi	04.00	Various Exhibit Materials on Improved Technologies and Products for Agriculture and related Sectors
11.	District Agromet Unit (DAMU)	To provide real time information on District Weather and Meteorological Data and their interpretations to the practicing farmers, farm women, rural youths and extension functionaries for taking suitable actions	ICAR, New Delhi	04.80	Work is in progress.
12.	**Total**			**33.62**	

9.15. Performance of Automatic Weather Station in KVK: -

Date of establishment	Source of funding i.e. IMD/ICAR/Others (pl. specify)	Present status of functioning

9.16. Contingent crop planning: -

Name of the state	Name of district/KVK	Thematic area	Number of programmes organized	Number of Farmers contacted	A brief about contingent plan executed by the KVK

10. Report on Cereal Systems Initiative for South Asia (CSISA): - Not Applicable

a) Year:
b) Introduction / General Information:

	Title	Objective	Treatment details	Date of sowing	Replication	Result with photographs
Experiment 1						
Experiment 2						
Experiment 3						
…						
..						
Others (If any)						

11. Details of TSP: - Not Applicable

a. Achievements of physical output under TSP during 2017-18

Programmes	**Physical achievements**
Asset creation (Number; Sprayer, ridge maker, pump set, weeder etc.)	
On-farm trials (Number)	
Frontline demonstrations (Number)	
Farmers training (in lakh)	
Extension personnel training (in lakh)	
Participants in extension activities (in lakh)	
Seed production (in tonnes)	
Planting material production (in lakh)	
Livestock strains and fingerlings production (in lakh)	
Soil, water, plant, manures samples testing (in lakh)	
Provision of mobile agro – advisory to farmers (in lakh)	
No. of other programmes (Swachha Bharat Abhiyaan, Agriculture knowledge in rural school, Planting material distribution, Vaccination camp etc.)	

b. Fund received under TSP in 2017-18 (Rs. In lakh):

c. Achievements of physical outcome under TSP during 2017-18

Sl. No.	Description	Unit	Achievements
1	Change in family income	%	
2	Change in family consumption level	%	
3	Change in availability of agricultural implements/ tools etc.	No. per household	

d. Location and Beneficiary Details during 2017-18

District	*Sub-district*	*No. of Village covered*	*Name of village(s) covered*	*ST population benefitted (No.)*		
				M	F	T

12. Progress report of NICRA KVK (Technology Demonstration component) during the period (Applicable for KVKs identified under NICRA): - Not Applicable

Natural Resource Management

Name of intervention undertaken	Numbers under taken	No of units	Area (ha)	No of farmers covered / benefitted									Remarks
				SC		ST		Other		Total			
				M	F	M	F	M	F	M	F	T	

Crop Management

Name of intervention undertaken	Area (ha)	No of farmers covered / benefitted									Remarks
		SC		ST		Other		Total			
		M	F	M	F	M	F	M	F	T	

Livestock and fisheries

Name of intervention undertaken	Number of animals covered	No of units	Area (ha)	No of farmers covered / benefitted									Remarks
				SC		ST		Other		Total			
				M	F	M	F	M	F	M	F	T	

Institutional interventions

Name of intervention undertaken	No of units	Area (ha)	No of farmers covered / benefitted									Remarks
			SC		ST		Other		Total			
			M	F	M	F	M	F	M	F	T	

Capacity building

Thematic area	No of Courses	No of beneficiaries								
		SC		ST		Other		Total		
		M	F	M	F	M	F	M	F	T

Extension activities

Thematic area	No of activities	No of beneficiaries								
		SC		ST		Other		Total		
		M	F	M	F	M	F	M	F	T

Detailed report should be provided in the circulated Performa

13. Awards / Recognition received by the KVK

Sl. No.	Name of the Award	Year	Conferring Authority	Amount	Purpose

Award received by Farmers from the KVK district

Sl. No.	Name of the Award	Name of the Farmer	Year	Conferring Authority	Amount	Purpose
01.	Certificate of Excellence Award at the Halakarshana Utsav - 2018	Sri Aurobinda Pal	2018-19	Visva-Bharati University	-	To encourage the farmer in spreading the Technological Package of Practices for Fishery based Integrated Farming System (IFS)
02.	Certificate of Excellence Award at the Halakarshana Utsav - 2018	Sri Debasish Mondal	2018-19	Visva-Bharati University	-	To encourage the farmer in spreading the Package of Management Practices of Small-scale Dairy Unit
03.	Certificate of Excellence Award at the Halakarshana	Sri Subhasish Ghosh	2018-19	Visva-Bharati University	-	To encourage the farmer in spreading the Package of

	Utsav - 2018					Practices of Pulse and Oilseed Cultivation through organization of Cluster Front Line Demonstration Programmesas a part of Crop diversification efforts
04.	Certificate of Excellence Award at the Halakarshana Utsav - 2018	Sri Jogen Ghosh	2018-19	Visva-Bharati University	-	To encourage the farmer in spreading the message of Crop Diversification through utilizing the Improved Package of Practices for Elephant Foot Yam Cultivation

14. Any significant achievement of the KVK with facts and figures as well as quality photograph

A. The Paper, titled, ""A Study on the Front Line Demonstration of White Pekin Duck reared under Farm Condition in Birbhum District of West Bengal", authored by Madhuchhanda Khan, Krishna Mitra and Ruma Addy and presented by Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science), Rathindra Krishi Vigyan Kendra, Palli Siksha Bhavana, Visva-Bharati was judged as Best Paper and **Dr. Khan was awarded with "Best Paper Award"** by the Organizing Committee of the National Seminar on Sustainable Resource Management for enhancing Farm Income, Nutritional Security and Livelihood Improvement, organized by the Department of Agronomy, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum in collaboration with NABARD, Kolkata and in association with Indian Society of Agronomy – Sriniketan Chapter, Visva-Bharati at the Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, held from 01.02.2019 to 03.02.2019.

B. Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension), Rathindra Krishi Vigyan Kendra, Palli Siksha Bhavana, Visva-Bharati has been declared as Certified Farm Adviser on Seed Technology by National Institute of Agricultural Extension Management (MANAGE), Ministry of Agriculture and Farmers' Welfare, Govt. of India, Rajendranagar, Hyderabad, Telengana and Indian Council of Agricultural Research (ICAR) – Indian Institute of Seed Science, Kushmaur, Mau, Uttar Pradesh with First Division Marks (70.00 Per Cent Marks) on 13.02.2019. Dr. Ray successfully completed Module – I on On-Line Platform and Module – II of 15 Days rigorous Training and Examination on both Theoretical and Practical Aspects of Seed Technology at the Indian Council of Agricultural Research (ICAR) – Indian Institute of Seed Science (IISS), Kushmaur, Mau – 275103, Uttar Pradesh from 23rd. October, 2017 to 6th . November, 2017. Dr. Ray has successfully completed the Module – III on Practical Field Work also.

प्रमाणपत्र सं./Certificate No. 016

राष्ट्रीय कृषि विस्तार प्रबंध संस्थान (मैनेज)

(कृषि एवं किसान कल्याण मंत्रालय, भारत सरकार का संगठन)
राजेन्द्रनगर, हैदराबाद - 500 030, तेलंगाना, भारत

National Institute of Agricultural Extension Management (MANAGE)

(An Organisation of Ministry of Agriculture & Farmers Welfare, Govt. of India)
Rajendranagar, Hyderabad - 500 030, Telangana, India

प्रमाणपत्र / Certificate

प्रवेश सं. /Admission No. CFA08WB1709

यह प्रमाणित किया जाता है कि *डॉ प्रबुद्ध राय* ने एक वर्षीय प्रमाणित फार्म सलाहकार कार्यक्रम को 2018 के दौरान पूर्ण किया और उन्हें *प्रथम* श्रेणी प्राप्त हुई । *मैनेज* और *भा.कृ.अनु.प - भारतीय बीज विज्ञान संस्थान, कुश्मौर, मऊ, उत्तर प्रदेश* द्वारा उन्हें *"प्रमाणित फार्म सलाहकार (बीज प्रौद्योगिकी)"* के रुप में पहचाना जाता है ।

This is to certify that Dr. Prabuddha Ray has successfully completed one year Certified Farm Advisor Programme during 2018 and is placed in First Division He / She has been recognized as "Certified Farm Advisor (Seed Technology)" by MANAGE and ICAR - Indian Institute of Seed Science, Kushmaur, Mau, Uttar Pradesh.

प्रधान समन्वयक (सीएफए)
Principal Coordinator (CFA)

Seal

महानिदेशक
Director General

हैदराबाद/ Hyderabad
दिनांक/ Date: 13 FEB 2019

Certified Farm Advisor Programme
(seed Technology) by MANAGE-ICAR

15. Number of commodity based organizations / farmers' cooperative society / FPO formed / associated with during last one year (Details of the group/society may be indicated)

Sl. No.	Name of the organization / Society	Trust Deed No. & date	Date of Trust Registration Address	Proposed Activity	Commodity Identified	No. of Members	Financial position (Rupees in lakh)	Success indicator
01.	Bharkata Adivashi Chashi Bhai Lahanati Producer Company Limited	**U01100WB2018PTC225331; Dated – 23.03.2018**	**Date of Trust Registration: -** 23.03.2018 Address – Village - Jethia, P. O. – Varkata, Police Station – Md. Bazar, Dist. – Birbhum, Pin. – 731216, West Bengal	Main Activities: - Production of Certified Seeds of Paddy and Mustard	Certified Seeds of Paddy and Mustard	500	Rs. 1,50,000.00 (Rupees One Lakh Fifty Thousands) was kept as savings earned from sale of the FPO products in the Current Account of the FPO.	
02.	Mashra Adibashi Farmers Producer Company Limited	**U36999WB2018PTC224177; Dated – 05.01.2018**	**Date of Trust Registration: -** 05.01.2018. Address – Village – Nirisha, P. O. – Kastogara, Police Station – Rampurhat, Dist. – Birbhum, Pin. – 731216, West Bengal	Main Activities: - Production of Certified Seeds of Paddy and Lentil	Certified Seeds of Paddy and Lentil	500	Rs. 76,000.00 (Rupees Seventy Six Thousands) was kept as savings earned from sale of the FPO products in the Current Account of the FPO. Under this FPO, there are 35 Numbers of Farmers' Interest Groups (FIGs) whose total Capital is Rs. 2,00,000.00.	
03.	Mondal Farmers' Producer Company Limited	**U36100WB2018PTC224713; Dated – 21.02.2018.**	**Date of Trust Registration: -** 21.02.2018. Address: - Village – Seharakuri, P. O. – Seharakuri, Police Station – Md. Bazar, Dist. – Birbhum, Pin. – 731127, West Bengal.	Main Activities: - Goatery, Mushroom Production, Cultivation of Aromatic Paddy using Vermi-Compost, Production of Paper Plates.	Goats, Mushroom, Aromatic Paddy, Vermi-Compost and Paper Plate	1000	Rs. 3,00,000.00 (Rupees Three Lakhs) was kept as savings earned from sale of the FPO products in the Current Account of the FPO.	

16. Integrated Farming System (IFS)

Details of KVK Demo. Unit: - Not Applicable

Sl. No.	Module details (Component-wise)	Area under IFS	Production (Commodity-	Cost of production	Value realized in Rs.	No. of farmer adopted	% Change in adoption during

		(ha)	wise)	in Rs. (Component -wise)	(Commodity-wise)	practicing IFS	the year

17. Technologies for Doubling Farmers' Income

Sl. No.	Name of the Technology	Brief Details of Technology (3-5 bullet points)	Net Return to the farmer (Rs.) per ha per year due to adoption of the technology	No. of farmers adopted the technology in the district	One high resolution 'Photo' in 'jpg' format for each technology
1	Cultivation of Kharif Oilseed Crop Sesame, Var. - SWB-32-10-1 (Sabitri)	**Variety: -** Seeds of Improved Variety SWB-32-10-1 (Sabitri) @ 6 kg. / ha **Herbicide application: -** Application of herbicides Pendimethalin @ 3 lit. / ha at 1 – 3 DAS. **Sulpher application** **Micro-Nutrient Spray:-**Foliar Spray of Micro-Nutrients: - Zn EDTA @ 1 gm. / lit. of water at 25 and 45 DAS.	Rs. 33,265.00 / ha. / Annum	216	**Please see Photograph - A**
2.	Crop Diversification through Cultivation of High Value Low Volume Vegetable viz. Broccoli	**Spacing:** 2.0 feet x 2.0 feet **Time of Planting -** August – October **Seed Treatment –** Treated with 2 - 2.5 gm Thiram / litre of water. **Application of Manure per hectare –** Compost- 20-25 ton; 160 (100 + 60) kg Urea; 550 kg SSP; 170 kg MoP **Application of Micro-nutrients -** 1 - 1.5 kg Molybdenum and 20 kg. Sodium borate per hectare before planting	Rs. 1,52,500.00 / ha. / Annum	**107**	**Please see the Photograph - B**
3.	Jute based Rural Handicrafts	**Improved Techniques: -** Decorative Use of Jute for producing Pen Stand, Decorative Horses, Statues of Lord Buddha, Flower Vases, many other customized products as per the needs and creative demands of the customers **Materials: -** Jute, Gums, Hard Boards, Coloured Beads, Coloured Jutes etc. **Designs: -** As per the requisite product **Plan of Works: -** At first design drawing is done, then a Mould is made with Paper based on that drawing, then Jute or Jute Threads are attached on the Paper mould with adhesive and finally it is decorated with	Rs. 72,000.00 / Annum	**29**	**Please see Photograph - C**

		Coloured jutes and or Coloured Beads.			
4	Modern Kantha Stitch Works	**Improved Techniques: -** Traditionally "Kantha Stitch" Design was used on wrappers but now its shape, size are modified with Coloured Threads so that it can be used on dress designing and accessories like Side Bags, Bags, Sharee, Shirts, Pujabees, Blouse Piece, Top, Kurti etc. giving it a further value addition. **Materials: -** Cloth, Thread, Tracing Paper, Carbon Paper, Different Sized Frames, Different Sized Needles etc. **Designs: -** As per the requisite product and Consumer's preference. **Plan of Works: -** At first the design is drawn on a Plain Paper, then the impression of the Design is put on the Clothe with the help of Tracing Paper or Carbon Paper and then according to the design, the "Kantha Stitch" Work is carried out on the Clothe by different coloured Threads.	Rs. 96,000.00 / Annum	**1000**	**Please see the Photograph - D**
5.	Introduction of Giant Prawn (*Macrobrachium rosenbergii)* as A New Component of Composite Fish Culture	**Pond Preparation: -** Bottom pond muck is to be removed and liming @ 10 – 15 kg. / 0.13 ha. Manuring is to be done with Cowdung @ 2 – 3 Quintals / 0.13 ha. SSP is to be given @ 10 kg. / 0.13 ha. **Water Quality Management: -**pH. is to be maintained within a range of 7.5 to 8.0 through liming. **Fish Feed Management: -** Rice Bran, Groundnut Oil Cake, Fish Meal and Dry Yeast Powder in the ratio of 50: 30:10:10 respectively @ 3 – 5 per cent of Total Body Weight of the stocked Fish and Prawn. **Aeration Technique: -** Through using 0.5 HP – 1.0 HP Pump daily @ 2 hours / day. **Fish Health Management: -** Use of Potassium Per Manganate ($KMnO_4$) @ 150 grams / 0.13 ha / month and Aquahealth @ 100 ml. / 0.13 ha. / 3 Months Interval.	Rs. 3,40,000.00 / ha. / Annum	**35**	**Please see the Photograph - E**
6.	Proper blending of Technologies and Products for Scientific Dairy farming	**Crossbreeding and Breed up-gradation through Artificial Insemination (A. I.)** in cattle is the most suitable and economical technique for generating higher genetic and production potential. **Conscientious heat detection,** detection of oestrous by fern pattern of cervical mucus and proper timing of insemination is ensured. **Crossbreeding in indigenous low producing cattle with superior germplasm**	Rs. 4,88,400.00 / A Dairy Unit consisting of 25cows (15 crossbreed and 10 upgraded deshi Cows) + 20 Calves / Annum	**25**	**Please see the Photograph - F**

		influences the genetic potential of the crossbred so born. The age at puberty have been attended at 2 to 2.5 years of age. **All the female calves have to be fed properly** from the beginning of the birth so that they attain desired body weight and maturity at an early age. **Cultivation of green fodder and feeding the Cattles with area specific mineral mixture are ensured.** **The traditional feeding practice is to be modified** by providing mineral mixture, concentrate and green forages and formulation of low cost feed. **After parturition animals usually always come to heat up to 2- 2 1/2 months.** **Proper vaccination and medical check up** schedules and medicine regimes are to be followed.			
7.	Production enhancement through improved back yard farming utilizing Improved Poultry Breeds viz. Vanaraja and Rhode Island Red (RIR)	**Backyard poultry farming with rural improved breeds.** **Breed up gradation** by crossing these two breeds viz. Vanaraja and Rhode Island Red with local birds. **Hatching of eggs of both Vanaraja and Rhode Island Red by using local hen.** **Supply chicks and fertile eggs** of improved rural poultry breed. **Construction of a low-cost poultry house** made of locally available materials, such as bamboo and wood as night shelter and to protect the birds from predators. **Birds are to be let loose as free-range scavenging for utilizing the feed base**, i.e., fallen grain, insect, earthworm, kitchen waste, green grass etc. with supplementary feeding of concentrate mixture prepared by the locally available feed resources. **Almost one fourth of the amount of concentrate mixture may be replaced by *Azolla* (*Azolla pinnata*) and vegetables like *Kalmi* (*Ipomoea aquatica*) and Spinach (*Spinacia oleracea*) etc.** as per suggestion of the Scientists. **De-worming and vaccination** of birds are to be done as per the standard protocol with technological backstopping by the Scientists. On the advice of the Animal Science Scientists administration of the F_1 LaSota and R_2B Vaccines against Ranikhet Disease and IBDV Intermediate Strain Vaccine	Rs. 63,265.50 / Batch / Unit of 20 Numbers of Deshi Birds + 20 Numbers of Rhode Island Red Birds + 20 Numbers of Vanaraja Birds / Annum	**65**	**Please see the Photograph - G**

		against Gumboro disease are to be done.			
8.	Low Cost Commercial Vermin-Composting Unit	**Earth-Worms (*Eisenia foetidae*)** are being used. **Low cost pits** built-up with mainly bare bricks covered Polythene Sheets are to be used. **Organic farm and domestic wastes** along with cow dung are to be used as compost culture media. **Regular optimum watering of compost media** is to be ensured. **Sieving and packaging of usable Vermin-Compost** is done as and when necessary.	Rs. 85,714.00 / Annum	**51**	**Please see the Photograph - H**
9.	Feeding of Quality Green Fodder both Leguminous and Non-Leguminous to Milch Cattles	**Recommended Package of Practices for Fodder Cultivation** such as Land Preparation, Fertilizer Application, Timely Sowing, Fertilizer Application, Irrigation Scheduling, Integrated Pest Management Practices and Harvesting Schedules. **Short Duration Varieties** of Fodder Crops viz. Maize, Cow Pea etc. between two seasonal crops. **Cultivation of Cereal Fodder Crops like Maize, Sorghum, Oat etc. with Fodder Legumes like Cow Pea, Berseem etc.** **Cultivation of Multi-Cut Varieties of Fodder Crops** at regular intervals to get optimum production. **Legume and Non-Legume Fodders should be mixed in 1: 3 ratio.** **For lactating Crossbred Milch Cows, the daily production ration contains 1.25 + 1 kg concentrate per 2.5 kg Milk Production and requires 25 to 30 kgs. Green Grasses when Green Grass is plenty.** **For lactating Deshi Milch Cows, the daily feed schedule consists of 1 + 1 kg. Concentrate per 2.5 to 3.0 kg Milk Production with up to 20 kg. Fodder feeding.** **Every 10 kgs. Fodder feeding will reduce 1 kg. Concentrate feeding and thus reducing the cost of inputs.**	Rs. 54,850.00 / Cow / Lactation	**169**	**Please see Photograph - I**

Photograph – A

Cluster FLD on Kharif Sesame in 2016-17 in the Field of Sri Ashutosh Biswas, Village: - Srichandrapur, District – Birbhum organized by the Rathindra KVK, Birbhum at the Vegetative Growth Stage

Photograph - B

Sri Nilu Das of Village: - BaroShimulia, Dist. - Birbhum in his Field of Broccoli

Photograph – C

Various Jute based Handicraft Products prepared by the Trainees of Rathindra KVK

Photograph - D

Kantha Stitched Sharee produced by the members of the SHG named "Shilpashree" of Village: - Kankutia, Dist. - Birbhum

Photograph – E
Sri DilipDolui (Left) harvesting his produce of Giant Prawn along with Carps in a Composite Fish Culture System from his Pond at Village:- Durgapur, Dist. - Birbhum

Photograph - F
Sri Bidhan Chandra Sinha along with his Cross Bred and Up-graded Milch Cows at His Dairy Unit at Village – Mirzapur, Dist. - Birbhum

Photograph – G

Sri Tapan Kumar Ghosh with Poultry Birds at his Back Yard Poultry Farm at Village – Bishnubati, Dist. - Birbhum

Photograph – H

Sri Partha Mal watering the Vermin-Compost Materials in his Low Cost Commercial Vermin-Composting Unit at Village: - Daronda, Dist. - Birbhum

Photograph – I

Cultivation and Use of Green Fodder for Cattle Feeding at the Rathindra KVK adopted Village: - Digha, C. D. Block: Sainthia, District - Birbhum through KVK Initiative

18. Report on Digital Farming Initiatives in Agriculture / Digital Ag. Extension Service

	Database prepared/ covered for		KVK level Committee		Various activity conducted for farmers
Phase	**Total no. of villages**	**Total no. of farmers**	**Date of formation**	**Name of members**	
I (up-to 15.03.2018)	200	4000	30.01.2018.	Dr. Subrata Mandal, Dr. Krishna Mitra, Dr. Prabuddha Ray, Sri Sourav Mondal, Dr. Madhuchhanda Khan, Sri Suraj Kumar Bhakta and Sri Palash Ankure.	Giving information on relevant topics and issues of Agriculture and related Sectors and activities of the Rathindra Krishi Vigyan Kendra through free Short Message Service
II (up-to 24.04.2018)	269	6000			
Total	469	10000			

19. Information on Visit of Ministers to KVKs, if any

Date of Visit	Name of Hon'ble Minister	Name of Ministry	Salient points in his/ her observation (2-3 bulleted points)

20. a) Information on ASCI Skill Development Training Programme, if undertaken during 2017-18 and 2018-19

Year	Name of the Job role	Name of the certified Trainer of KVK for the Job role	Date of start of training	Date of completion of training	No. of participants	Whether uploaded to SDMS Portal (Y/N)	Fund utilized for the training (Rs.)
2016-17	Animal Health Worker	Dr. Madhuchhanda Khan	09.02.2017.	05.03.2017.	20	Yes	1,81,600.00

2016-17	Hatchery Production Worker - Fishery	Dr. Krishna Mitra	16.02.2017.	12.03.2017.	20	Yes	1,81,000.00
2017-18	Agriculture Extension Service Provider	Dr. Prabuddha Ray	09.03.2018.	31.03.2018.	20	Yes	1,65,200.00
2018-19	Agriculture Extension Service Provider	Dr. Prabuddha Ray	05.02.2019.	01.03.2019.	20	Yes	1,73,800.00
2018-19	Hatchery Production Worker - Fishery	Dr. Krishna Mitra	05.02.2019.	01.03.2019.	20	Yes	1,81,000.00

b) Information on Skill Development Training Programme (Other than ASCI or less than 200 hrs., if any) if undertaken during 2018-19

Thematic area of training	Title of the training	Duration (in hrs.)	No. of participants								Fund utilized for the training (Rs.)
			SC		ST		Other		Total		
			M	F	M	F	M	F	M	F	
Integrated Pest Management	Integrated Pest Management (IPM) in Vegetables	56	03	02	02	00	03	05	08	07	42,000.00
Household Food Security by Kitchen gardening and Nutrition gardening and Value addition	Nutrition Gardening and Value Addition	40	00	30	00	00	00	00	00	30	75,000.00
Production of Organic Inputs	Organic Farming	40	00	00	30	00	00	00	30	00	75,000.00

21. Information on NARI Project (if applicable)

Name of Nodal Officer	No. of OFT on specified aspects	Title(s) of OFT	No. of FLD on specified aspects	No. of capacity development programme on specified aspects	Total no. of farm women/ girls involved in the project	Details of Issues related to gender mainstreaming addressed through the project

22. Information on Krishi Kalyan Abhiyan Phase - I / Phase – II / Phase - III, if applicable

Krishi Kalyan Abhiyan- I and II

A. Training

Name of programme	*No. of programmes*	*No. of farmers benefitted*									*No. of officials attended the programme*
		SC		*ST*		*Others*		*Total*			
		M	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*T*	
KKA-I	07	17	21	126	83	61	24	204	128	332	06
KKA-II	08	54	06	42	08	82	11	178	25	203	05

B. Distribution of seed / planting materials / input / others

Name of programme	*No. of Programme*	*Total quantity distributed*				*No. of farmers benefited*									*No. of other officials (except KVK) attended the programme*
		Seed (q)	*Planting material (lakh)*	*Input (kg)*	*Other (kg/ No.)*	*SC*		*ST*		*Others*		*Total*			
						M	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*T*	
KKA-I	**05**				**Waste Decomposer 2050 Nos.**	**11**	**71**	**01**	**35**	**78**	**09**	**90**	**115**	**205**	
KKA-II	**06**				**Waste Decomposer 1730 Nos.**	**12**	**11**	**03**	**36**	**51**	**61**	**65**	**108**	**173**	
	07		*Vegetable Seedlings 7100 Nos.*	*Azolla 35.00 Kgs.*		**11**	**13**	**04**	**01**	**20**	**22**	**35**	**36**	**71**	

C. Livestock and Fishery related activities

Name of programme	*No. of Programme*	*Activities performed*				*No. of farmers benefited*									*No. of other officials (except KVK) attended the programme*
		No. of animals vaccinated	*No. of animals dewormed*	*Feed/ nutrient supplements provided (kg)*	*Any other (Distribution of animals / birds / fingerlings) [No.]*	*SC*		*ST*		*Others*		*Total*			
						M	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*T*	
KKA-I															
KKA-II	**02**	**380**		**76.00**		**39**	**04**	**21**	**04**	**06**	**20**	**66**	**28**	**94**	

D. Other activities

Name of programme	*Activities*	*No. of farmers benefited*									*No. of other officials (except KVK) attended the programme*
		SC		*ST*		*Others*		*Total*			
		M	*F*	*M*	*F*	*M*	*F*	*M*	*F*	T	
KKA-I	Soil Health Card Distributed NADEP Pit established Farm implements distributed Others, if any	02	02	00	00	21	03	23	05	28	
KKA-II	Soil Health Card Distributed NADEP Pit established	04	03	04	00	14	04	22	07	29	

Farm implements distributed
Others, if any

Krishi Kalyan Abhiyan - III

No. of villages covered	***No. of animal inseminated***	***No. of farmers benefitted***								***Any other, if any (pl. specify)***
		SC		***ST***		***Others***		***Total***		
		M	***F***	***M***	***F***	***M***	***F***	***M***	***F***	T

23. Any other programme organized by KVK, not covered above

Sl. No.	Name of the programme	Date of the programme	Venue	Purpose	No. of participants

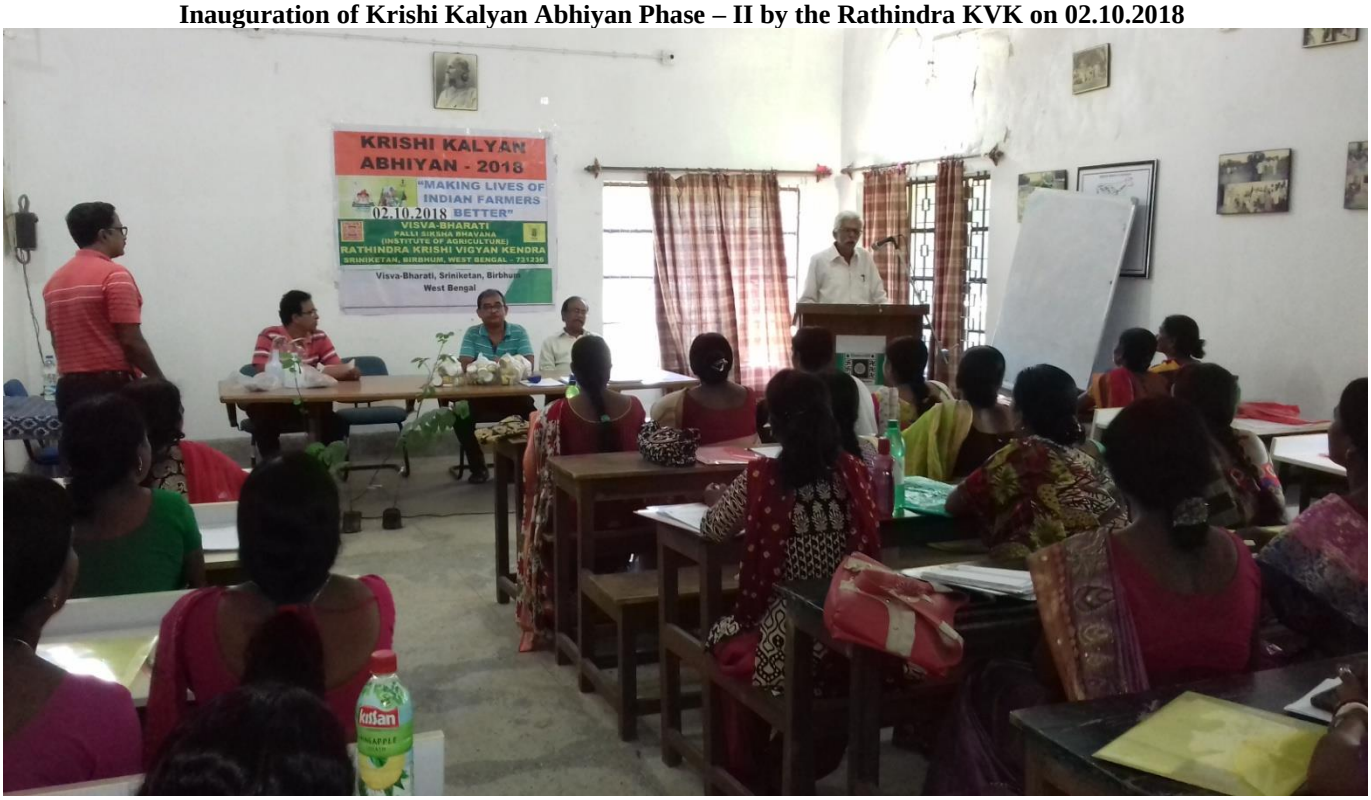
24. Good quality action photographs of overall achievements of KVK during the year (best 10)

Krishi Kalyan Abhiyan (Phase-I)

Krishi Kalyan Abhiyan Phase – I being Implemented by the Rathindra KVK

Krishi Kalyan Abhiyan 2018

Inauguration of Krishi Kalyan Abhiyan Phase – II by the Rathindra KVK on 02.10.2018



Krishi Kalyan Abhiyan (Phase-II)

Krishi Kalyan Abhiyan 2018 (phase-II)

Swachh Bharat Abhiyan

Swachhata Hi Sewa Programme being organized by the Staff of the Rathindra KVK

Mahila Kisan Divas 2018

Skill Training (ASCI) on
“Agriculture Extension Service Provider” 2018-19

Skill Training (ASCI) on "Hatchery Production Workers" 2018-19

Diploma in Agriculture Extension Service for Inputs Dealers

District Kisan Mela-2019, started on 24.2.2019

Webcasting of Inauguration of Pradhan Mantri Kisan Samman Nidhi on 24.2.2019. Total participants 261nos

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Annexure – I

Proceedings of the XXII[rd.] Scientific Advisory Committee (SAC) Meeting of Rathindra Krishi Vigyan Kendra, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum – 731236, West Bengal.

XXIII[rd]. Scientific Advisory Committee (SAC) Meeting of the Rathindra Krishi Vigyan Kendra, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati was held on the 26[th] March 2019 at the Seminar Hall of the Rathindra KVK (RKVK) at 3.00 PM.In the Inaugural Session of the meeting, Prof. Ashis Kumar Chatterjee, Principal, Palli Siksha Bhavana (PSB) and In-Charge, Rathindra KVK, Visva-Bharati welcomed the members present in the meeting.

Prof. Ashis Kumar Chatterjee then appealed to the members for the confirmation of the proceedings of the previous SAC meeting held on 26.03.2019 and the Principal highlighted the actions taken on the recommendations of the previous SAC Meeting. Members of the House confirmed the proceedings of the previous Meeting and appreciated the actions taken on the recommendations.

Then with the consent of the House, Prof. Chatterjee requested to proceed to present the Progress Report of the Rathindra KVK for the period of 1[st]. April, 2018 to 28[th]. February, 2019. The Progress report was presented by Dr. Subrata Mandal, Programme Coordinator (Officiating). He welcomed all the members and announced that Prof. Ashis Kumar Chatterjee, Principal, Palli Siksha Bhavana was requested to chair the meeting as per directive of the Hon'ble Vice-Chancellor, Visva-Bharati.

The Progress report was presented with power point slides. All the activities of different discipline were presented in detail. All the Hon'ble members congratulated Rathindra Krishi Vigyan Kendra for their activities and expressed their satisfaction.

After the completion of the presentation, Prof. Arun Kumar Barik, Head, Dept. of Agronomy, Palli Siksha Bhavana, Visva-Bharati raised a question on the establishment of 'Seed Hub' at Rathindra Krishi Vigyan Kendra. Programme Coordinator informed the house that 'Seed Hub' has not been sanctioned by ICAR-ATARI to Rathindra Krishi Vigyan Kendra. However, Rathindra Krishi Vigyan Kendra is producing different Seed in its instructional farm. Dr. Arun Kumar Barik further asked about Fodder Museum as discussed in previous SAC meeting. Dr. Maduchhanda Khan, SMS (Animal Science) of Rathindra Krishi Vigyan Kendra replied that fodder museum has already been established.

Prof. Souvik Ghosh, Head, Dept. of Agriculture Extension, Palli Siksha Bhavana, Visva-Bharati suggested to include the names of villages where the OFT programmes are being conducted.

Mr. Samir Ghosh, Deputy Director of Agriculture (Admn), Birbhum wanted to know in details about the use of lime in the OFT on Garden Pea. Dr. Subrata Mandal replied that the farmers are not able to give 100% lime due to high cost and less lime in the intensive cropping system. In this context, 10% or 20% of the requirement of time may be tried for the present crop. And the reference was made from ICAR bulletin.

Dr. Probir Kumar Choudhary, Vice-Principal, PSV, suggested that Rock phosphate may be used as liming materials in Birbhum district. However, Prof. Arun Kumar Barik, Head, Dept. of Agronomy, explained that Rock phosphate is usually not available in local market.

Mr. Samir Ghosh, DDA, suggested toproposal for fund for conducting OFT on liming from ATAM,Birbhum .

Dr. S. Chakrabarty, Head, CIHAB, Palli Siksha Bhavana, suggested that numbers of training Programme in horticulture should be increased. Hon'ble chairman welcome the proposal and said that due to lack the scientist in Horticulture, more numbers of training programmes could not be conducted.

Dr. A. Pal, Head, Genetics & Plant Breeding suggested to include new varieties of chickpea in FLD programme. Dr. Subrata Mandal, SMS (Agronomy) replied that the new varieties such Anuradha and JAKI-9248 have already been introduced in CFLD Programme.

Mr. Ajoy Kumar Ghosh, D.T.C,of DRDC, Birbhum requested to organise collaborative programme in Animal Science for Farm Women.

Dr. Hirak Chatterjee, Head, Plant Protection, suggested to include Benefit Risk ratio in OFT on Plant Protection.

After discussion of the progress report, the Annual Action Plan of Rathindra Krishi Vigyan Kendra for 2019-20 was presented by Dr. Prabuddha Ray, SMS (Agriculture Extension), Rathindra Krishi Vigyan Kendra.

Prof. Arun Kumar Barik, Head, Dept. of Agronomy, Palli Siksha Bhavana, Visva-Bharati suggested to establish a crop museum contained with different crop of new variety.

Dr. S. Chakrabarty, Head CIHAB, proposed that the training programme of Horticulture may be conducted with the help of CIHAB Dept. of Palli Siksha Bhavana, Visva-Bharati.

Sri Tapan Kumar Ghosh, a progressive farmer of Bishnubati suggested to include training programme on quality Seed Production.

Sri Partha Mal, a young progressive farmer proposed to emphasize the training programme on Organic Input Production.

Prof. Ashis Kumar Chatterjee, Principal. Palli Siksha Bhavana and In-charge, Rathindra Krishi Vigyan Kendra thanked everyone for attending the SAC meeting and for making it a successful event.

The meeting ended with a vote of thanks from Dr. Subrata Mandal, Programme Coordinator (Officiating), Rathindra Krishi Vigyan Kendra, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, Birbhum.

Annexure - II

Details of Training Programmes

Date	Clientele	Title of the Training Programme	Duration in days	Venue (Off/On Campus)	Number of participants			Number of SC/ST					
								SC			ST		
					Male	Female	Total	Male	Female	Total	Male	Female	Total
DISCIPLINE – AGRONOMY													
03.04.2018.	PF	Spraying of micronutrients in Green Gram	01	ON	08	00	08	00	00	00	05	00	05
08.05.2018.	EF	Improved Agrotechnology of Maize cultivation	01	ON	38	00	38	02	00	02	00	00	00
22.05.2018	EF	Diagnosis of nutrient deficiency symptoms	01	ON	37	00	37	02	00	02	00	00	00
29.05.2018	EF	Use of fertilizers for improved agriculture	01	ON	30	00	30	02	00	02	00	00	00
07.06.2018 to 10.06.2018	PF	Collection of soil sample and preparation for soil testing and interpretation	04	OFF	50	00	50	14	00	14	00	00	00
11-12.06.2018 and 15.06.2018 and 17.06.2018	PF	Green manuring with dhaincha and azolla in kharif paddy	04	OFF	50	00	50	07	00	07	00	00	00
12.06.2018	EF	Efficient water management in field crops	01	ON	34	00	34	02	00	02	00	00	00
12.06.2018	EF	Farm Mechanisation	01	ON	34	00	34	02	00	02	00	00	00
18-19.06.2018 And 22-23.06.2018	PF& PFW	Improved Method of Pulse and Oilseed Cultivation in Kharif Season	04	ON	18	16	34	04	06	10	01	04	05

19.06.2018	EF	Economic cultivation practice of Rice	01	ON	27	00	27	02	00	02	00	00
24-26.06.2018 and 29.06.2018	PF & PFW	Direct seeding technologies of rice	04	ON	11	23	34	04	11	15	00	07	07
26.06.2018	EF	Improved agro-technology of green fodder cultivation	01	ON	34	00	34	02	00	02	00	00	00

Date	Clientele	Title of the Training Programme	Duration in days	Venue (Off/On Campus)	Number of participants			Number of SC/ST					
								SC			ST		
					Male	Female	Total	Male	Female	Total	Male	Female	Total
DISCIPLINE – AGRONOMY													
10.7.2018	EF	Waste decomposer and its use	01	ON	39	00	39	02	00	02	00	00	00
17.07.2018	EF	Practical procedure of decomposer use	01	ON	39	00	39	02	00	02	00	00	00
19.07.2018 to 22.07.2018	PF	Improved Methods of Black Gram and Sesame Cultivation in Kharif Season	04	ON	30	00	30	05	00	05	00	00	00
6.08.2018	EF	Doubling farmers income by 2022- scope and strategy	01	OFF	25	02	27	02	00	02	02	00	02
7.8.2018	PF & PFW	Sowing and fertilizer management of kharif blackgram	01	ON	08	06	14	01	00	01	01	00	01
13.08.2018	PF	Improved variety and sowing of kharif sesame	01	OFF	28	00	28	05	00	05	04	00	04
14.08.2018.	PF	Land preparation, sowing and herbicide	01	OFF	28	00	28	02	00	02	04	00	04

		application in kharif sesame											
19.08.2018.	PF	Rhizobium inoculation and sowing of kharif blackgram	01	OFF	28	00	28	01	00	01	00	00	00
1-2.09.2018	PF	Preparation and use of NADEP compost with waste decomposer	02	ON	28	00	28	03	00	03	00	00	00
04.09.2018	EF	Types of problem soil and their management	01	ON	28	00	28	02	00	02	00	00	00
04.09.2018	EF	Testing on various attributes of quality seeds	01	ON	28	00	28	02	00	02	00	00	00
7.09.2018.	PF	Sowing and phosphate management of blackgram in post kharif season	01	ON	28	00	28	03	00	03	00	00	00

Date	**Clientele**	**Title of the Training Programme**	**Duration in days**	**Venue (Off/On Campus)**	**Number of participants**			**Number of SC/ST**					
								SC			**ST**		
					Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
DISCIPLINE – AGRONOMY													
8.09.2018.	PF	Sowing and fertilizer management of sesame in post kharif	01	ON	11	00	11	05	00	05	00	00	00
09-11.09.2018 and 14.09.2018	PF	Participatory paddy seed production	04	ON	27	00	27	11	00	11	02	00	02
11.09.208	EF	Soil health and its management	01	ON	31	00	31	02	00	02	00	00	00

11.09.208	EF	Identification of medicinal plants	01	ON	31	00	31	02	00	02	00	00
18.09.2018	EF	Soil moisture conservation in dryland area	01	ON	39	00	39	02	00	02	00	00
13.102018	PF	Cropping system and crop diversification using kharif pulse and oilseed	01	OFF	12	00	12	00	00	00	03	00	03
17.11.2018 to 07.12.2018	RY	Preparation and use of organic inputs	21	ON	19	01	20	04	00	04	04	00	04
26.11.2018	PF	Sowing procedure in fodder (oat) + Pulse (lentil) intercropping	01	ON	23	00	23	01	00	01	15	00	15
27.11.2018	PF	Land preparation, sowing and phosphate management of field pea	01	ON	17	00	17	02	00	02	00	00	00
28.11.2018	PF	Sowing and fertilizer management of mustard	01	ON	11	00	11	00	00	00	00	00	00
01.12.2018	PF & PFW	Sowing and phosphorus management of chick pea	01	OFF	29	01	30	01	01	02	19	00	19
03.12.2018	PF & PFW	Nutrient management of lentil	01	ON	07	06	13	00	01	01	02	02	04
07.12.2018	PF & PFW	Sowing and fertilizer management of linseed	01	ON	11	14	25	00	03	03	01	01	02

Date	Clientele	Title of the Training Programme	Duration in days	Venue (Off/On Campus)	Number of participants			Number of SC/ST					
								SC			ST		
					Male	Female	Total	Male	Female	Total	Male	Female	Total
DISCIPLINE – AGRONOMY													
08.12.2018	PF & PFW	Intercultural operation of mustard	01	ON	03	08	11	00	00	00	02	05	07
09.12.2018	PF & PFW	Micronutrient application in lentil	01	ON	06	08	14	02	02	04	00	02	02
10.12.2018	PF & PFW	Sowing and herbicide application in chickpea	01	OFF	30	20	50	06	08	14	02	00	02
18.12.2018	PF & PFW	Micronutrient spray in rabi pulses	01	ON	20	00	20	02	00	02	03	00	03
22.12.2018	PF & PFW	Improved variety and fertilizer application in wheat cultivation	01	OFF	08	20	28	02	20	22	00	00	00
02.03.2019 to 05.03.2019	PF & PFW	Seed Production Technologies of Black Gram and Green Gram in Summer season	04	ON	11	11	22	02	01	03	02	02	04
08.03.2019	PF & PFW	Herbicide and Micro-Nutrient Application in Green Gram	01	ON	01	10	11	00	02	02	00	01	01
Total			**86**		**1055**	**146**	**1201**	**117**	**55**	**172**	**72**	**28**	**100**

Date	Clientele	Title of the Training Programme	Duration in days	Venue (Off/On Campus)	Number of participants			Number of SC/ST					
								SC			ST		
					Male	Female	Total	Male	Female	Total	Male	Female	Total
DISCIPLINE – HORTICULTURE													
17.07.2018	EF	Important fruit crops of Birbhum and their package of practices	01	ON	39	00	39	02	00	02	00	00	00
14.08.2018	EF	Layout and preparation of seedbed for vegetables, season flowers etc.	01	ON	39	00	39	02	00	02	00	00	00
Total			**02**		**78**	**00**	**78**	**04**	**00**	**04**	**00**	**00**	**00**

Date	Clientele	Title of the Training Programme	Duration in days	Venue (Off/On Campus)	Number of participants			Number of SC/ST					
								SC			ST		
					Male	Female	Total	Male	Female	Total	Male	Female	Total
DISCIPLINE – PLANT PROTECTION													
01.05.2018	EF	Biological control of pests	01	ON	26	00	26	02	00	02	00	00	00
01.05.2018	EF	Practical field visit on IPM	01	ON	26	00	26	02	00	02	00	00	00
29.05.2018	EF	Proper use of different plant protection equipments	01	ON	30	00	30	02	00	02	00	00	00
05.06.2018	EF	Preparation of neem kernel extract	01	ON	40	00	40	02	00	02	00	00	00
19.06.2018	EF	Pest and disease management of mango, litchi, banana, guava	01	ON	27	00	27	02	00	02	00	00	00
26.06.2018	EF	Integrated Weed Management of kharif crops	01	ON	34	00	34	02	00	02	00	00	00
01-03.07.2018	PF	Different components of IPM, IDM, IWM	03	ON	30	00	30	08	00	08	00	00	00

03.07.2018	EF	Pest management of commercial flowers like rose marigold etc.	01	ON	39	00	39	02	00	02	00	00	00
03.07.2018	EF	Pest management of papaya, jackfruit and drumstick	01	ON	39	00	39	02	00	02	00	00	00
08-10.07.2018	PF & PFW	Integrated pest, disease and weed management in kharif paddy (phase-I)	03	OFF	36	15	51	02	07	09	28	08	36
03-05.08.2018	PF & PFW	Integrated pest, disease and weed management in kharif paddy (phase-II)	03	OFF	09	31	40	03	15	18	05	15	20
14.08.2018	EF	Pest, disease and weed management of pulses	01	ON	39	00	39	02	00	02	00	00	00
18.09.2018	EF	Pest and disease management of frenchbean, capsicum and broccoli	01	ON	39	00	39	02	00	02	00	00	00
25.09.2018	EF	Integrated weed management in rabi field crops and vegetables	01	ON	40	00	40	02	00	02	00	00	00
25.09.2018	EF	Weed management in aquatic bodies and non- cropped areas	01	ON	40	00	40	02	00	02	00	00	00
27.11.2018	EF	Making of Herbarium	01	ON	40	00	40	02	00	02	00	00	00
27.02.2019	EF	Over-view and final feed back of DAESI course	01	ON	40	00	40	02	00	02	00	00	00
Total			**23**		**574**	**46**	**630**	**41**	**22**	**63**	**33**	**23**	**56**

Date	Clientele	Title of the Training Programme	Duration in days	Venue (Off/On Campus)	Number of participants			Number of SC/ST					
								SC			ST		
					Male	Female	Total	Male	Female	Total	Male	Female	Total
DISCIPLINE – FISHERY													
27.-28-04.2018.	PF	Scientific Method of Pond Preparation for Fingerling raising	02	ON	24	00	24	01	00	01	00	00	00
15.05.2018	EF	Introduction of giant prawn in composite fish culture	01	ON	27	00	27	01	00	01	00	00	00
26.05.2018 to 29.05.2018.	PF	Introduction of vetki in composite fish culture	04	OFF	40	00	40	15	00	15	00	00	00
17-19.06.2018	PFW	Cage culture with magur, singi and koi with composite fish culture	03	ON	00	55	55	00	00	00	00	55	55
13.07.2018 to 16.07.2018.	PF	Preparation and management of rearing and stocking pond for composite fish culture	04	ON	42	00	42	05	00	05	01	00	01
27.07.2018 to 30.07.2018	PF	Preparation of balanced fish feed from low cost ingredients	04	ON	30	00	30	03	00	03	00	00	00
06.10.2018 To 08.10.2018	PF	Improved disease management practices in fresh water aquaculture	03	ON	35	00	35	06	00	06	01	00	01
27.12.2018	PF & PFW	Fisheries development in derelict water bodies for socio-economic improvement	01	OFF	59	11	70	25	10	35	02	00	02
11.01.2019 To 13.01.2019	PF	Integrated farming system	03	ON	20	00	20	08	00	08	00	00	00

05.02.2019 To 01.03.2019	RY	Hatchery Production Worker	25	ON	20	00	20	08	00	08	00	00	00
Total			**50**		**297**	**66**	**363**	**72**	**10**	**82**	**04**	**55**	**59**

Date	**Clientele**	**Title of the Training Programme**	**Duration in days**	**Venue (Off/On Campus)**	**Number of participants**			**Number of SC/ST**					
								SC			**ST**		
					Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
DISCIPLINE – ANIMAL SCIENCE													
27.04.2018and 29.04.2018.	PF & PFW	Identification and control of disease in poultry and their prophylactic measures with their special reference to bird flue	02	ON	19	11	30	05	03	08	03	04	07
22.05.2018	EF	Hazards of indiscriminate use of pesticides in Animal Sector and its remedy	01	ON	37	00	37	02	00	02	00	00	00
18-19.05.2018	PF & PFW	Reduction of treatment cost by ITK	02	OFF	22	28	50	00	00	00	22	28	50
24.06.2018 to 25.06.2018	PF & PFW	Back yard farming improvement with utilization of natural resources	02	ON	32	01	33	02	00	02	12	01	13
21-22.07.2018	PF	Quality fodder cultivation	02	ON	33	00	33	08	00	08	01	00	01
05-06.10.2018	PF & PFW	Sheep farming	02	ON	27	03	30	13	00	13	08	03	11
02-03.11.2018	PF & PFW	Identification and control of diseases in dairy animals with their prophylactic measures	02	ON	29	01	30	09	00	09	08	01	09

26.11.2018	PFW	Importance of Black Bengal goat rearing	01	OFF	00	40	40	00	02	02	00	00	00
27.11.2018	PFW	Rearing of Khaki Campbell ducks	01	OFF	00	30	30	00	00	00	00	00	00
15.12.2018 To 16.12.2018	PF & PFW	Duck farming	02	OFF	48	02	50	13	01	14	10	01	11
17.12.2018 To 18.12.2018	PF & PFW	Goat farming	02	OFF	43	07	50	21	03	24	13	04	17
01.01.2019 To 07.01.2019	PF & PFW	Quail farming	07	ON	16	05	21	03	00	03	00	03	03
18.01.2019 To 19.01.2019	PFW	Piggery farming	02	OFF	00	30	30	00	00	00	00	30	30
01.02.2019 To 02.03.2019	RY	Goatery	30	ON	08	22	30	01	06	07	04	16	20
09.03.2019 To 18.03.2019	PF	Scientific Dairy Management with Special Reference to Nutritional Aspects	08	ON	10	00	10	03	00	03	02	00	02
Total			**76**		**324**	**180**	**504**	**80**	**15**	**95**	**83**	**91**	**174**

Date	**Clientele**	**Title of the Training Programme**	**Duration in days**	**Venue (Off/On Campus)**	**Number of participants**			**Number of SC/ST**					
								SC			**ST**		
					Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
DISCIPLINE – HOME SCIENCE													
01-02.07.2018	PFW	Nutrition Garden	02	ON	00	25	25	00	05	05	00	00	00

16-17.07.2018	PFW	Nutritional requirement of pre-school children	02	ON	00	25	25	00	09	09	00	00	00
23.07.2018	PFW	Care and management of pregnant mothers	01	OFF	00	50	50	00	00	00	00	50	50
03-04.08.2018	PFW	Importance of Nutrition Garden	02	OFF	00	50	50	00	00	00	00	50	50
25.08.2018	PF & PFW	Awareness programme on Food Security	01	OFF	21	22	43	00	00	00	21	22	43
Total			**08**		**21**	**172**	**193**	**00**	**14**	**14**	**21**	**122**	**143**

Date	**Clientele**	**Title of the Training Programme**	**Duration in days**	**Venue (Off/On Campus)**	**Number of participants**			**Number of SC/ST**					
								SC			**ST**		
					Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
DISCIPLINE – AGRICULTURAL EXTENSION													
08.05.2018	EF	Different Govt. scheme running in Birbhum district	01	ON	38	00	38	02	00	02	00	00	00
15.05.2018	EF	Role of input dealers as extension functionaries in Birbhum District	01	ON	28	00	28	01	00	01	00	00	00
18.05.2018	PF & PFW	Pradhan Mantri FasalBimaYojona	01	ON	46	05	51	02	00	02	42	05	47
01.07.2018 to 03.07.2018.	PF & PFW	Concept, formation and functioning of joint liability group	03	ON	42	13	55	04	00	04	34	13	47
06-07.07.2018	PF & PFW	Formation of Farmers Producers Organisation	02	ON	43	12	55	04	00	04	35	12	47
08.07.2018	PFW	Production of bio-fertiliser using bio-decomposer and marketing of bio-fertilizer	01	OFF	00	72	72	00	13	13	00	35	35

09.07.2018	PF	Production of bio-fertiliser using bio-decomposer and searching of market and market linkages for bio-fertilizer	01	OFF	25	00	25	00	00	00	00	00	00
06.08.2018	PF	Market information and SUFAL BANGLA project for marketing agricultural produces	01	ON	16	00	16	00	00	00	00	00	00
10.08.2018 To 12.08.2018	PF & PFW	Mechanism and use of Kisan Credit Card (KCC)	03	ON	32	15	47	03	07	10	27	08	35
18.08.2018 To 20.08.208	PF & PFW	Formation of Farmers Club	03	ON	34	16	50	03	01	04	30	15	45
05.10.2018 To 07.102018	PF & PFW	Marketing information and market linkage of pulse and oilseed farmers	03	ON	07	29	36	00	28	28	00	01	01
27.11.208 and 30.11.2018	PF & PFW	Introduction of Crop Insurance (CI) and Pradhan Mantri FasalBimaYojona (PMFBY)	02	ON	12	22	34	02	03	05	01	01	02
17.12.2018 To 18.12.2018	PF & PFW	Development of farmers club as business facilitators	02	ON	20	10	30	03	02	05	04	01	05
05.02.2019 To 01.03.2019	RY	Agriculture Extension Service Provider	25	ON	20	00	20	07	00	07	05	00	05
23.03.2019 To 25.03.2019	PF	Marketing Information and Market Linkage of Vegetable Farmers	03	ON	10	00	10	00	00	00	10	00	10
Total			**52**		**373**	**194**	**567**	**31**	**54**	**85**	**188**	**81**	**279**
Grand Total of All the Disciplines			**297**		**2722**	**804**	**3526**	**345**	**170**	**515**	**401**	**396**	**797**